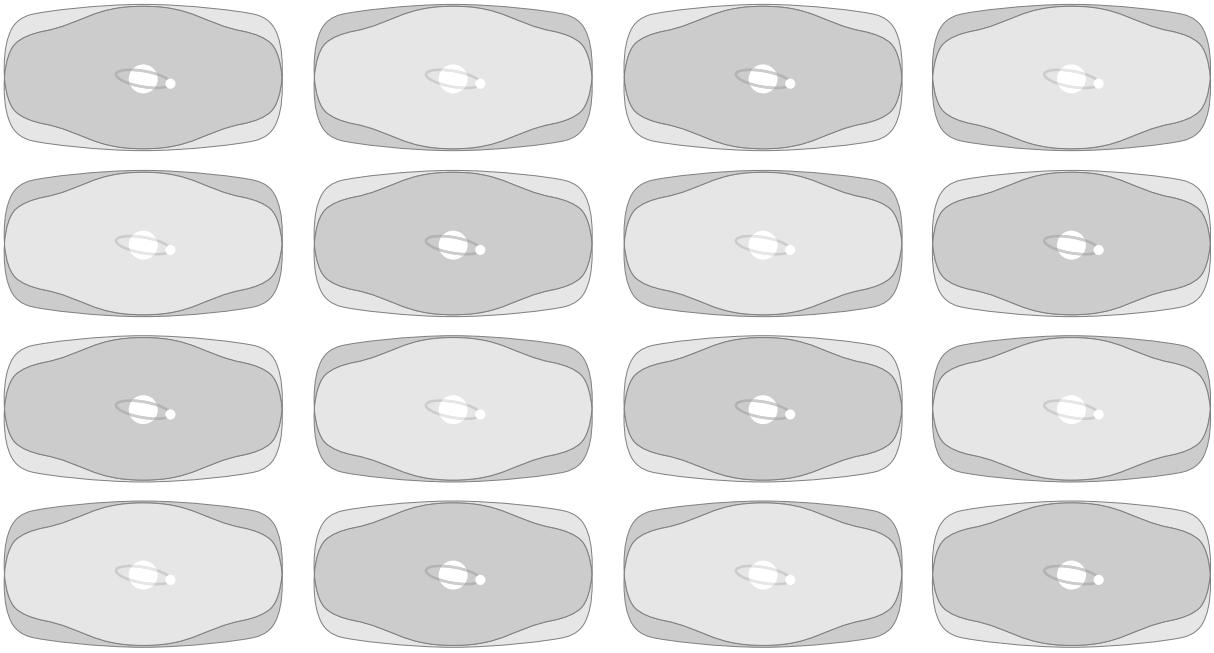
Canon

NW
Network Guide

Graphic Color Printer

W2200

Network Guide



USA

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Notations About Text

Conventions

To ensure the safe and most efficient use of this printer, important information is provided under the headings listed below. Before you use this guide, make sure that you understand what these headings mean and remember the important information described under these headings.

Warning

- Failure to follow these instructions could result in fatal or serious injury. Always remember and follow the guidelines and advice described under this heading to ensure your own safety and the safety of other people working around the printer.

Caution

- Failure to follow these instructions could lead to mistakes in the use of printer and result in minor injury or serious damage to the printer. Always remember and follow the guidelines and advice described under this heading to ensure safe use of the printer.

Important

- Instructions and guidelines for operation of the printer provided under this heading describe restrictions and other important information which if ignored could cause minor damage to the printer or other equipment or result in the loss of valuable data. Always remember and follow the guidelines and advice under this heading to avoid mistakes in procedure.

Note

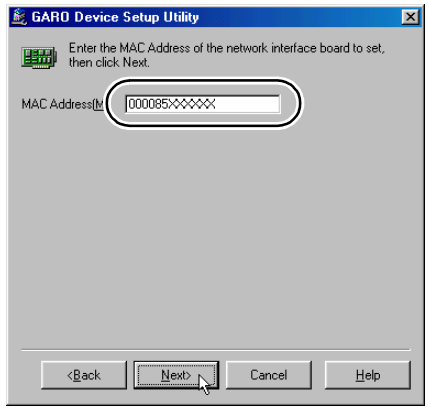
- Information under this heading includes tips and hints that will help you avoid minor problems and use the printer more efficiently.

Screen Examples

The screenshots provided as examples in operational procedures may be slightly different, depending on the operating system in use.

A button or item to press or select in a procedure appears enclosed with a circular mark ( ) in the screen sample. If a procedure requires more than one button press or selection, all the items are marked, so be sure to select them as described in the procedure.

3 Enter the MAC address into the MAC Address box then click the Next button.



Abbreviations

Throughout this document the following abbreviations are used in text.

- Microsoft® Windows® Millennium Edition is abbreviated as “Windows Me”
- Microsoft® Windows® 98 is abbreviated as “Windows 98”
- Microsoft® Windows® 95 is abbreviated as “Windows 95”
- Microsoft® Windows® XP is abbreviated as “Windows XP”
- Microsoft® Windows® 2000 is abbreviated as “Windows 2000”
- Microsoft® Windows NT® is abbreviated as “Windows NT”
- Microsoft® Windows® is abbreviated as “Windows”
- The term “GARO”, used in the name of this printer driver, is an acronym for “Graphic Arts Language with Raster Operations”, a printer language of creating raster images.

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1 Before You Begin

This chapter describes the network, network environment, and other important information that you should confirm before you begin.

Required System Environment

This section describes the system environments that are supported by the network interface board of the printer.

System Environment Required for Printing

The lists below describe the system environments required to support the network in use.

■ Using a TCP/IP Network for Printing

- Compatible Operating Systems:
  - Windows Me/Windows 98/Windows 95
  - Windows NT 4.0
  - Windows 2000
  - Windows XP
  - Solaris Version 1.1.x (SunOS Version 4.1.x) or later
  - Solaris Version 2.5.x (SunOS Version 5.5.x) or later
  - HP-UX Version 10.x or later
  - IBM-AIX Version 4.x or later
  - Red Hat Linux 5.2 or later
  - Turbo Linux 3.0 or later
- Compatible Computers:2
  - IBM PC or IBM compatible PC

Important

- If you are using Windows NT 4.0, install Service Pack 6 or later.

■ Using a NetWare® Network for Printing

- Compatible Servers:
  - Novell NetWare® Version 4.2/5.1
- Compatible Clients:
  - Windows Me/Windows 98/Windows 95
  - Windows XP Professional
  - Windows 2000 Server
  - Windows 2000 Professional
  - Windows NT Server 4.0
  - Windows NT Workstation 4.0
- Compatible Computers:
  - IBM PC or IBM PC compatible PC.

■ Using a NetBIOS Network for Printing

- Compatible Operating Systems:
  - Windows Me, Windows 98, Windows 95
- Compatible Computers:
  - IBM PC or IBM PC compatible PC.
- Required Memory:
  - 16MB or more

Important

- If you are using Windows NT 4.0, install Service Pack 6 or later.

■ Using an AppleTalk Network for Printing

- Compatible Computer
  - A Macintosh Series computer equipped with a Power PC processor.
- Compatible Operating Systems
  - Mac OS 8.6 or later
  - Mac OS x 10.1 or later
- Compatible AppleTalk
  - EtherTalk Phase 2
- Required Memory
  - 24 MB or more for Mac OS 8.6, 32 MB or more for Mac OS 9

Note

- This printer is not compatible with a Macintosh LocalTalk Network.

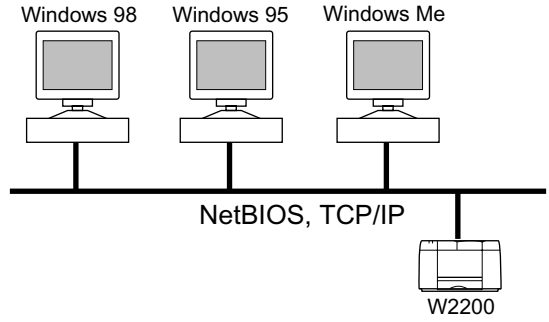
The Network Environment

Use the diagrams below as reference to determine the type of network where the printer is connected, and then follow the required procedure.

Windows Network Examples

■ Windows Me, Windows 98, or Windows 95 Computers Only

If the network is like the network environment shown in the illustration below, you can print with a few simple settings if you use NetBIOS protocol. By installing Canon LPR Port on each computer, you can also use TCP/IP protocol.

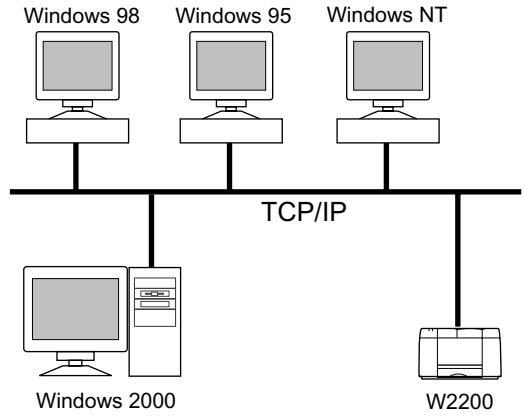


Refer to the following pages for details about the protocols to use.

- Chapter 2 TCP/IP Network Settings (Windows)
- Chapter 5 NetBIOS/NetBEUI Network Settings (Windows Me/Windows 98/Windows 95)

■ Windows XP, Windows 2000, Windows NT Computers

If the network is like the network environment shown in the illustration below, you can print using the TCP/IP protocol. Computers with Windows XP, Windows 2000, or Windows NT can use the TCP/IP functions of the operating system to print. By installing Canon LPR Port on each computer using Windows Me, Windows 98, or Windows 95, you can also use Canon LPR port to print.



Refer to the following pages for details about setting procedures.

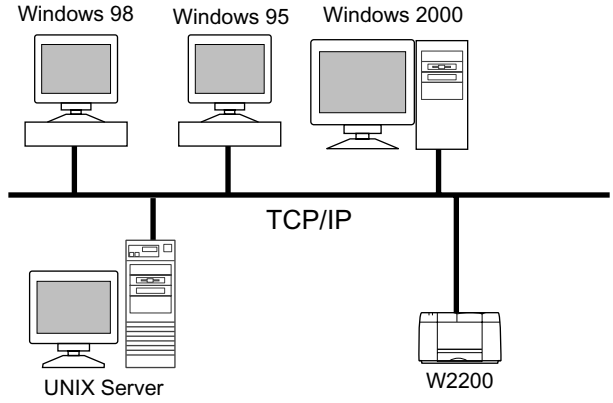
- Chapter 2 TCP/IP Network Settings (Windows)

If Windows XP or Windows 2000, Windows NT are used on the network, you can manage the network printer efficiently by setting up a print server. For more details about how to set up a print server, see the following section.

- Chapter 2 Setting the Printer for Sharing (→ P.2-31)

■ UNIX Server or Linux Server

If the network is like the network environment shown in the illustration below, you can print using TCP/IP protocol. If you print through a UNIX or Linux server set up as a print server, then the Windows computer can be released from print job processing much earlier, thus increasing the efficiency of your system.



Refer to the following pages for details about setting procedures.

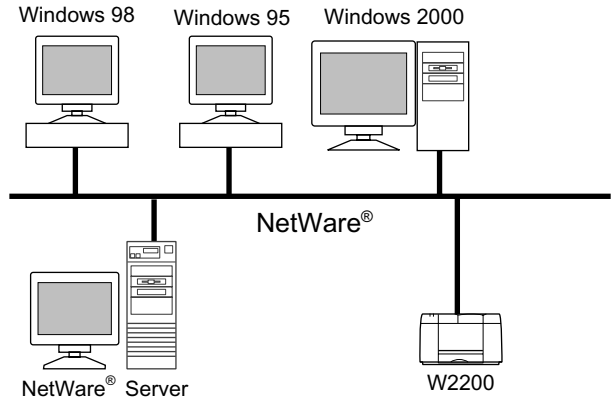
- Chapter 2 TCP/IP Network Settings (Windows)

Note

- You cannot print directly from a computer running UNIX or Linux.
- You can use NetBIOS in common even in a network environment where there is a UNIX or Linux computer. In such a case, perform the settings for the protocol to use.

■ NetWare® server

If the network is like the network environment shown in the illustration below, you can print using NetWare® protocol. NetWare® client software must be installed on every server computer and client computer.



Refer to the following pages for details about setting procedures.

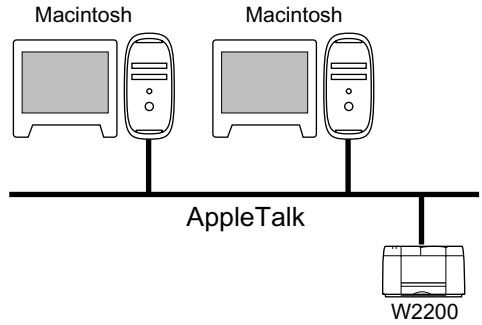
- Chapter 4 NetWare® Settings (Windows)

Note

- You can use TCP/IP, AppleTalk or NetBIOS in common even in a network environment where there is a NetWare® server. In such a case, perform the settings for the protocol to use.

Macintosh Network Examples

For a Macintosh computer, the AppleTalk (EtherTalk) protocol is used.



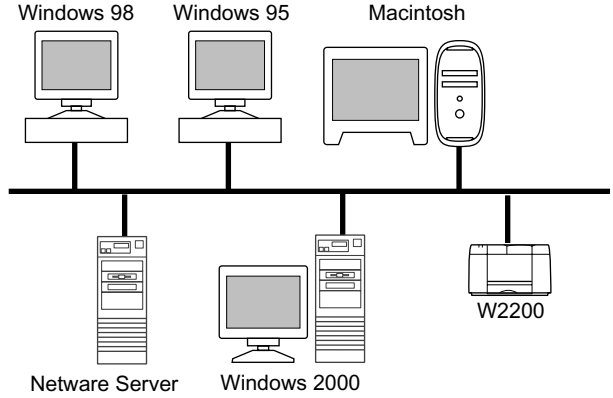
Refer to the following pages for details about setting procedures.

- Chapter 3 AppleTalk Network Settings (Macintosh)

Example of a Network with Mixed Computers

When different computers are used on the same network, the appropriate procedure must be performed for each computer.

For example, if a Windows 95 and Macintosh are used together, the settings described above “Windows Network Examples” and “Macintosh Network Examples” must be performed for each computer.



Refer to the following pages for details about protocols.

- Chapter 2 TCP/IP Network Settings (Windows)
- Chapter 3 AppleTalk Network Settings (Macintosh)
- Chapter 4 NetWare® Settings (Windows)

2 TCP/IP Network Settings (Windows)

This chapter describes the setting methods and procedures for connecting the printer to a TCP/IP network.

Procedures Required for a TCP/IP Network

Here is a summary of the procedure required to set the printer for use on a TCP/IP network.

1 Connect the network cable →Setup Guide

Follow the instructions in the Setup Guide to connect the network cable.

2 Setting the Printer IP Address →P.2-3

Setting the IP address allows setting the printer protocol to enable communication between the printer and the computer. You can use one of the methods below to set the protocol:

- GARO Device Setup Utility (Canon software application provided with the printer)
- ARP/PING command
- Printer operation panel

3 Setting TCP/IP Protocol for the Printer →P.2-9

This procedure selects TCP/IP for the printer protocol. You can use one of the methods below to set the protocol from the computer.

- Web Browser (Remote UI)
- FTP Client

4 Setting the Computer →P.2-17

This procedure is performed for each computer to be used for printing.

Important

- Steps 1, 2, and 3 should be performed by the network system administrator.
- The following print applications can be used to print on a TCP/IP network: LPD, FTP, RAW (Windows XP, Windows 2000), and IPP (Windows XP, Windows 2000, Windows Me, Windows 98, Windows 95)

Setting the Printer IP Address

Before setting the printer protocol, you must set the IP address to enable communication between the printer and the computer. You can use one of the methods below to set the IP address. Use whichever method is easiest:

- GARO Device Setup Utility (→ P.2-4)
- ARP/PING command (→ P.2-6)
- Printer operation panel (→ P.2-7)

Important

- When you use the GARO Device Setup Utility to perform the printer network settings, the subnet mask and gateway address settings are set to 0.0.0.0, so use the Remote UI or printer operation panel to make the settings for your network.
- If you are using an operating system that is not compatible with the GARO Device Setup Utility, use another computer on the network, use the ARP/PING command, or use the printer operation panel to perform the settings.
- The GARO Device Setup Utility must be installed on your computer in order to use this utility to make the settings. Ask your system administrator to install the GARO Device Setup Utility on your computer. (→ Setup Guide)
- Before setting the IP address, confirm that the printer is switched on and connected to the network.
- The MAC address is required to perform the setting with the GARO Device Setup Utility or the ARP/PING command. If you need to confirm the MAC address, use the printer operation panel to print a Status Print or Ext. I/F Print.
  1. Press the Online button. The Online lamp switches off.
  2. Press the Cancel Job/Utility button.
  3. Press < or > to select Status Print or Ext. I/F Print then press ∨.
- Before setting the IP address, confirm that the printer is switched on and connected to the network.
- If you are using a DHCP, BOOTP, or RARP server where the IP address is acquired automatically, use the printer operation panel to select “Automatic” for the “IP Mode” setting, then select ON for the server in use.
- If you are using a DHCP, BOOTP, or RARP server, selecting the IP address for the printer is not required. However, the IP address changes every time the printer is powered on, so in order to access the printer every time the printer is switched on, the IP address must be checked by Status Print or Ext. I/F Print.

Setting the IP Address with GARO Device Setup Utility

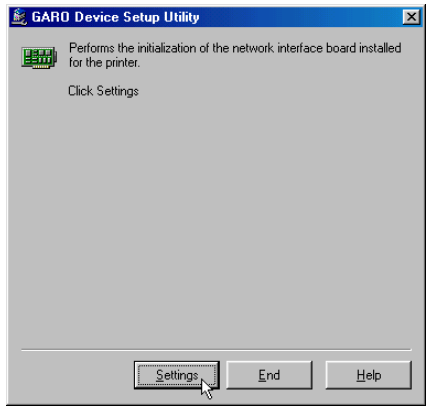
If you are using Windows, use the GARO Device Setup Utility, the software utility provided with the printer, to perform the printer network settings.

Note

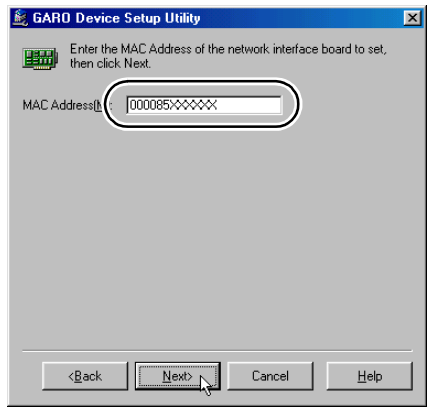
- If you are using a Macintosh computer, use the printer operation panel to perform the settings. (→ Setup Guide)

1 On the desktop, click the Start button, point to Programs, then click GARO Device Setup Utility.

2 Click the Settings button.



3 Enter the MAC address into the MAC Address box then click the Next button.



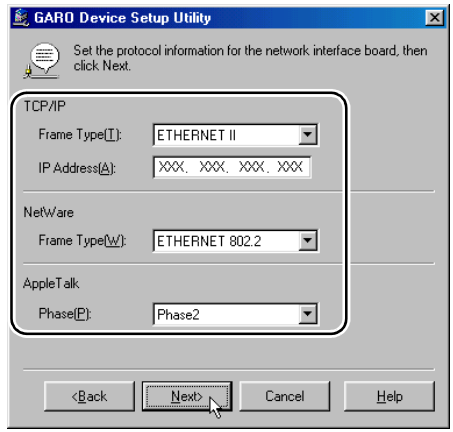
The utility searches for the printer on the network and when the printer is found, the protocol settings dialog box opens.

Important

- If the printer cannot be found, make sure that the computer and the printer are in the same subnet. If you use the GARO Device Setup Utility to perform the settings, you must make the settings from a computer in the same subnet as the printer.

4 For the TCP/IP Frame Type, select ETHERNET II from the list, enter the IP address allocated for the printer into the IP Address box, then click the Next button.

When printing via AppleTalk, select Phase2 for AppleTalk Phase. When printing with NetWare®, select the frame type in use for Frame Type.



5 Confirm the settings then click the Finish button.

The network interface settings are changed.

Note

- The subnet mask and gateway address settings have been set to 0.0.0.0. After completing the above settings, use the Remote UI or the printer operation panel to perform the subnet mask and gateway address settings for your network. (→ P.2-9)

This completes preparation for selecting the printer protocol. Now you are ready to select the printer protocol. (→ P.2-9)

Setting the IP Address with the ARP/PING Command

The examples of entries and settings below are for the English operating system.

1 Start at the MS-DOS prompt or command line.

If you are using UNIX, open the Console screen and log on as a super user.

2 Execute the following commands, and add the static entry to the arp table.

`arp -s` <IP address> <MAC address>

IP address:

Set the IP address assigned to the printer. The IP address consists of four decimal numbers (within the range 0 to 255) separated by dots.

MAC address:

Set the MAC address of the printer. In the MAC address every two numbers is separated by a hyphen (-). For UNIX the numbers are separated with a colon (:).

Windows Sample Entry:

```
arp -s XXX.XXX.XXX.XXX 00-00-85-XX-XX-XX
```

UNIX Sample Entry:

```
arp -s XXX.XXX.XXX.XXX 00:00:85:XX:XX:XX
```

Note

- If you are using IBM-AIX, enter:
  `arp -s ether` <IP address> <MAC address>

3 Execute the following commands to set the IP address in the network interface board.

For Windows:

`ping` <IP address> `-l 479`

For Solaris 1.x/2.x:

`ping -s` <IP address> `479`

For IBM-AIX:

`ping` <IP address> `479`

For HP-UX:

`ping` <IP address> `487`

For Red Hat Linux/LASER5 Linux:

`ping -s` <IP address> `479`

For TurboLinux:

`ping -s` <IP address> `480`

IP address:

Set the same address entered at Step 2.

Windows Sample:

```
ping XXX.XXX.XXX.XXX -l 479
```

Note

- The -l entry is the alphabetic lower case "l" (not the number "1").
- The subnet mask and gateway addresses are set to 0.0.0.0.

This completes preparation for the protocol setting.

Setting the IP Address with the Printer Operation Panel

1 On the printer operation panel, press the Online button. The Online lamp goes off.

2 Press the Setup button.

3 Press **<** or **>** to select the following items then press **∨**.

Set Interface → Ext. Network → Set TCP/IP → Frame Type

4 Press < or > to select “Ethernet II” then press ∨.

5 Press < or > to select “IP Mode” then press ∨.

6 Select the method for setting the printer IP address. Press < or > to select either setting below then press ∨.

Automatic:
Select when the IP address is to be set with DHCP, BOOTP, or RARP.

Manual:
Select when the IP address is to be assigned directly for the printer.

7 If “Automatic” was selected at Step 6, press < or > to select “Protocol”, press ∨, then select ON or OFF for DHCP, BOOTP, and RARP.
If “Manual” was selected at Step 6, press < or > to select “IP Setting”, press ∨, then select “IP Address”, “Subnet Mask”, or “Default G/W”.

Note

- Use the following method to select “IP Address”, “Subnet Mask”, or “Default G/W”:
  1. Press < or > to select the target field then press ∨.
  2. Press < or > to select the desired number then press ∨.
  3. Repeat Step 1 and 2 for all fields.

8 Press ∧ 3 times, press < or > to select Regis. Settings, then press ∨.

Important

- In order to save the settings done in Step 4 to Step 7, you must execute “Regis. Settings”. The selected settings will not be enabled unless they are registered with “Regis. Settings”.

9 When you see “Execute?” in the operation panel display, press ∨.

10 When you see “Registered!” in the operation panel display, press the Online button. The Online lamp lights.

The printer is ready to print.

Setting TCP/IP Protocol for the Printer

To set the TCP/IP protocol on the computer to be used, you can use one of the software applications listed below. Use whichever method is easiest:

- Web Browser (Remote UI) (→ P.2-9)
- FTP Client (→ P.2-15)

Setting TCP/IP Protocol with a Web Browser (Remote UI)

1 Start the Web Browser, enter the following URL for the Address, then press the Enter key.

`http://`<Printer IP address or name>/

Example: `http://XXX.XXX.XXX.XXX/`

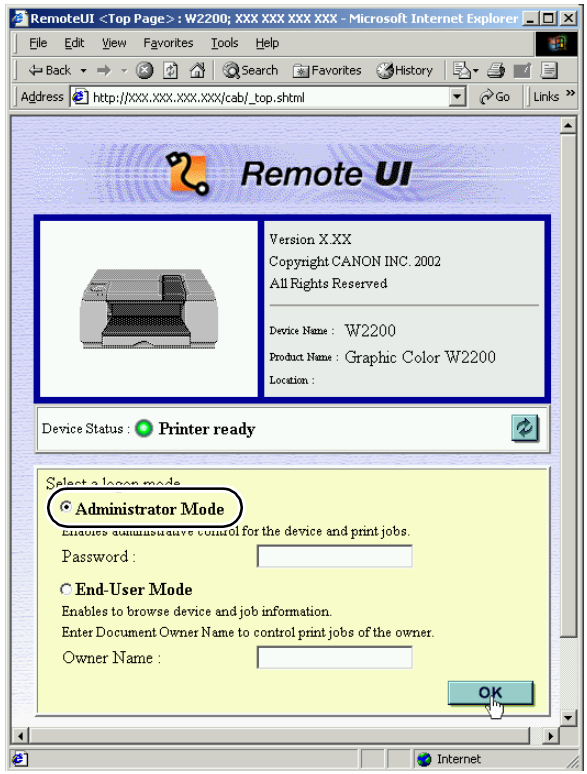
Important

- For the Web Browser, use Netscape Navigator/Communicator 4.04 or later, or use Internet Explorer 4.01SP1 or later. However, Netscape Navigator Version 6 or later is not compatible.
- If you are using TurboLinux 4.0, you cannot use Netscape Communicator 4.08 to set this printer. Use another version of a Web Browser.
- A connection through a Proxy Server cannot be used. If you are using a network environment with a Proxy Server, use the "Proxies" server setting in the Web Browser to add the printer IP address to the "Exceptions" text box (the address not used by the Proxy Server). (Performing this setting may differ, depending on the network environment.)
- Use the Web Browser to enable JavaScript and Cookie so these features can be used.
- If more than one Remote UI is being used, then the most recently used settings remain enabled. Starting and using only one Remote UI at a time is recommended.

Note

- If you have started the Remote UI with the printer name, confirm that the DNS environment and the board DNS settings are executed correctly.
- If the Raw mode or NetBEUI print history is displayed when the Remote UI starts, the Document Name and User information cannot be acquired. Therefore, only the following are displayed: "Unidentified" and Raw TCP" for the Document Name and User settings in the Raw mode, "Unidentified" and "LSLM_USER" for the Document Name and User settings for NetBEUI.

2 Click and select Administrator Mode then click the OK button.

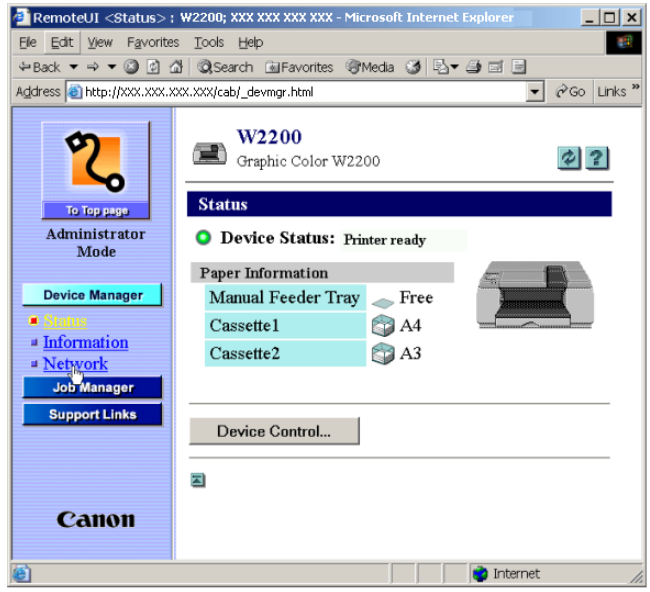


The Remote UI starts.

Note

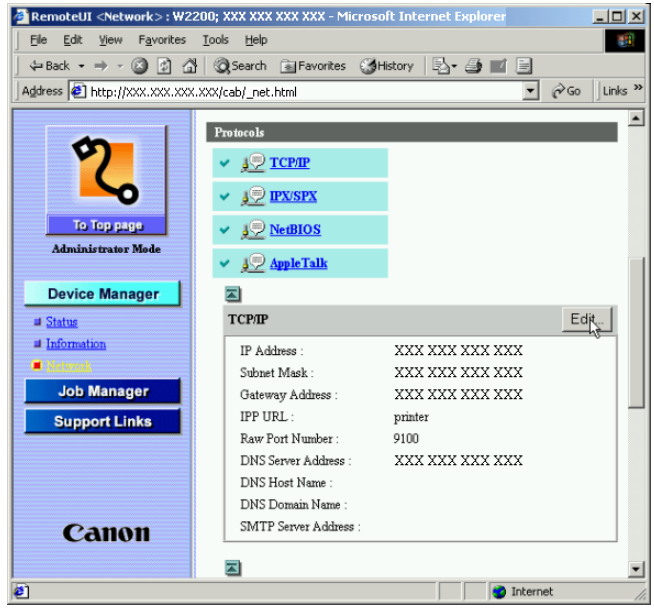
- If a password has been set for the printer, enter the password and click the OK button. If no password has been set, then a password entry is not required.

3 From the Device Manager menu on the left, select Network.



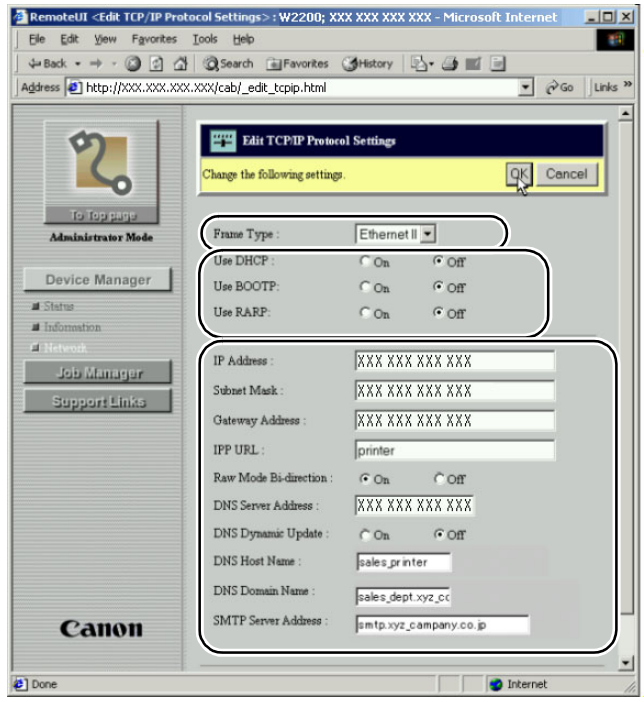
The Network page opens.

4 To the left of TCP/IP, click the Edit button.



The Edit TCP/IP Protocol settings page opens.

5 Click the Frame Type list box and select Ethernet II.



Note

- If you select Disabled, the network interface board will no longer be recognized on the TCP/IP network.
- To use the printer with “Disabled” specified, perform the IP address setting described in “Setting the Printer IP Address” (→ P.2-3)

6 Select the method for setting the printer IP address.

To set the IP address, first click all the buttons off.
If the IP address is to be acquired automatically, click on the button for the method to be used: DHCP, BOOTP, or RARP.

Note

- If you select DHCP, BOOTP, or RARP to select the IP address, make sure that the IP address can be set by DHCP, BOOTP, or RARP at power on after a reset. After confirming which setting can be used, the IP address is assigned. If the check box for DHCP, BOOTP, or RARP is clicked off, the check is not performed with that function. If none of these methods can be used, perform the IP address setting then enter the IP address into the “lP Address” text box.

- The check to determine whether DHCP, BOOTP, or RARP can be used requires about 1 or 2 minutes to execute. Clicking off the check boxes for a method that cannot be used is recommended.
- In order to have DHCP, BOOTP, or RARP assign the IP address, the DHCP, BOOTP, or RARP must be booted.

7 Enter the IP Address, Subnet Mask, and Gateway Address in the appropriate text box.

For the "IP Address" enter the IP address of the printer. For "Subnet Mask" and "Gateway Address" enter the settings for the TCP/IP network.

Note

- When using DHCP, BOOTP, or RARP you cannot select more than one. The value acquired from DHCP, BOOTP, or RARP is used.

8 Below the IPP URL text box, click the Raw Mode Bi-direction button on. Normally this setting does not need to be changed.

9 Perform the DNS settings.

In the DNS Server Address text box, enter the IP address of the DNS server. Next, in the DNS Domain Name text box, enter the assigned domain name of the printer.
Example: sales_dept.xyz_company.co.jp

Note

- DNS can be used for this printer in the following cases:
  - When the dynamic update function is enabled by clicking DNS Dynamic Update on (see Step 10 below).
  - After the name of the SMTP server has been specified with the entry in the SMTP Server Address box (see Step 11 below).

10 When the dynamic update function is used for DNS, click the DNS Dynamic Update check box on and set the following items:

DNS Host Name: Enter the host name of the printer.

(Example: sales_printer)

DNS Domain Name: Enter the assigned domain name of the printer.

(Example: sales_dept.xyz_company.co.jp)

Note

- The DNS dynamic update function automatically registers the printer IP address, as well as the specified DNS Host Name and Domain Name on the DNS Server.
- This function is used for a DNS server that can be automatically updated, i.e. for a Dynamic DNS Server.
- By using LPR to set the DNS Host Name and DNS Domain Name, the printer can be used without a fixed IP address.

11 To have the e-mail function notify the user about the printer status when paper jams or other problems occur, enter the IP address of the e-mail server into the SMTP Server Address.

Note

- This setting requires some preliminary detailed settings. (→ "Managing the Printer with E-mail Notification", P.2-34)

12 Press the OK button.

13 From the Device Manager menu on the left, select Network, then click the Reset button.

The new settings are enabled when the network interface board is re-started.

This completes the printer protocol settings.

Setting TCP/IP Protocol with FTP Client

The examples of entries and settings below are for the English operating system.

1 Start at the MS-DOS prompt or command line.

If you are using UNIX, open the Console screen.

2 Execute the following command:

`ftp` <printer IP address>

3 Enter root as the user name.

If a password has been set for the printer, enter the password next.

If no password has been set, press the Enter key without entering a password.

Note

- You can log in with spaces or with another user name other than root, but you can perform only operations other than settings.
- You cannot log in as "Anonymous".

4 Execute the following command to download the Config file.

```
get config
```

5 Use Notepad or any ASCII editor to edit the downloaded Config file.

For more details about each item, see "List of Network Settings" (→ P.7-3)

6 Execute the following command to upload the config file.

```
put config CONFIG
```

7 The settings are enabled after either executing a print server reset or re-starting the printer. To reset the server, execute the following command:

```
get reset
```

This completes the printer protocol settings.

Setting the Computer

After completing the protocol settings, perform the computer settings.

- TCP/IP network settings

  The TCP/IP client software must be installed on all computers on the network that are to be used for printing. For details, refer to your operating system instructions.

  - LPD

    The print application most commonly used with TCP/IP. Perform the printer driver installation and select the connection method. (→ "Settings for LPD/RAW Connection", P.2-18)

  - RAW

    The print application used in Windows XP and Windows 2000. This method is faster than using LPD. Perform the printer driver installation and select the connection method. (→ "Settings for LPD/RAW Connection", P.2-18)

  - IPP

    The print application used in Windows Me, Windows 98, Windows 95, Windows XP, and Windows 2000. This method uses HTTP protocol to print on an Internet or Intranet printer. Perform the printer driver installation and select the connection method. (→ "IPP Connection Methods", P.2-27)

  - FTP

    The printer application that uses FTP client software to copy a file to the printer for printing. (→ "Managing the Printer with an FTP Client", P.2-33)

Note

- Setting a Windows XP, Windows 2000 or Windows NT computer on the network as the print server improves the efficiency of managing the network printer. For more details, see "Setting the Printer for Sharing" (→ P.2-31).

Settings for LPD/RAW Connection

■ Windows Me, Windows 98, Windows 95 LPD Connection

1 Install the printer driver. (→ Setup Guide)

At the printer connection screen, select “Local Printer”. Do not select “Network Printer”.

The port used by the printer changes after installation, so select LPT1 or any desired port.

2 Install the LPR Port utility on the User Software CD-ROM provided with the printer.

- Mount the provided User Software CD-ROM in the computer CD-ROM drive.
- On the desktop, double-click the My Computer icon, click the CD-ROM Disk icon, then from the File menu select Open.
- Open the Lprport folder.
- Double-click the Setup file icon (Setup.exe) to execute.
- Follow the instructions on the screen to perform the installation.

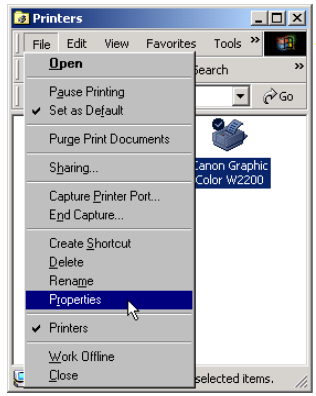
Important

- In some operating environments, the Setup Menu window appears as soon as the CD-ROM is mounted in the CD-ROM drive. If this occurs, click the Quit button then follow the procedure from Step 2 above.

3 The printer driver Printer Properties dialog box opens.

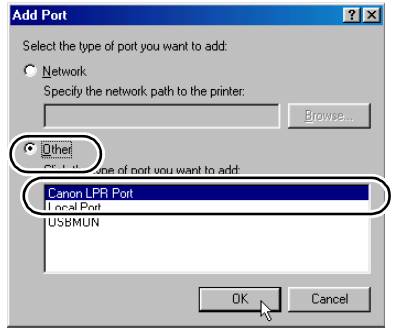
- On the desktop, click the Start button, point to Settings, then click Printers.

- Click the icon of the printer installed in Step 1, then from the File menu select Properties.

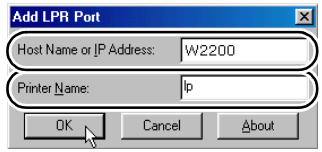


4 Perform the port settings.

- Select the Advanced sheet.
- Click the Add Port button. The Add Port dialog box opens.
- Click the Other button.
- Below “Click the type of port you want to add”, click “Canon LPR Port”, then click the OK button.



- In the Add LPR Port dialog box, enter the Host Name or the IP Address into the Host Name or IP Address text box.
- In the Printer Name text box, enter lp and click the OK button.



Important

- Before performing the port settings, make sure that the printer is switched on and connected to the network.
- After performing the procedure above, check the transfer mode currently in use and determine what other modes that can be used for printer communication. When data transmission to the printer fails, and error message is displayed. Click No to switch off the byte count mode.

5 Click the OK button to enable the settings.

This completes the connection settings.

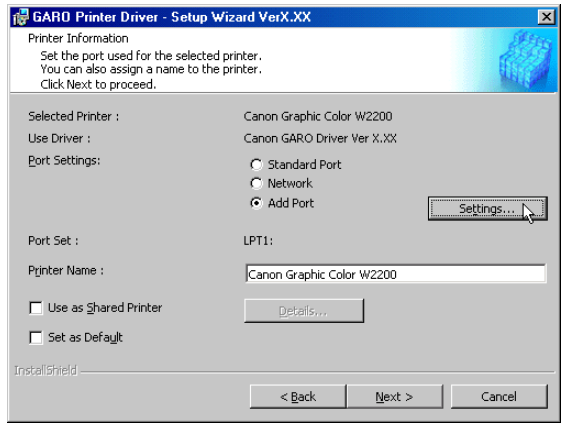
■ Windows XP, Windows 2000 RAW Connection

1 Install the printer driver.

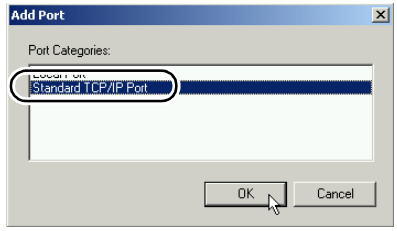
- Mount the provided User Software CD-ROM in the CD-ROM drive. The Setup Menu is displayed. If the User Software CD-ROM autoplay function is off, open My Computer and click the CD-ROM icon. From the File menu select AutoPlay.
- Select GARO Printer Driver Installation, then follow the instructions on the screen.
- At the printer selection screen, click the Add/Delete button.
- Select the name of the printer to use, click the "Add to the Printer List for Driver Installation" button, then click the OK button.
- Confirm that the correct name of the printer is displayed, then click the Next button.

2 Add a printer port for the printer connected via TCP/IP.

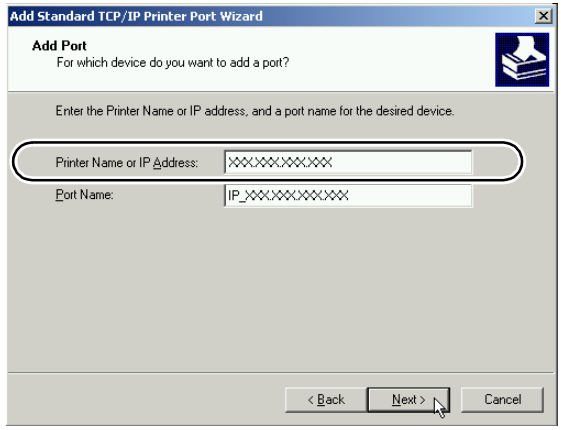
- When the Port Settings screen opens, select Add Port. Press the Settings button.



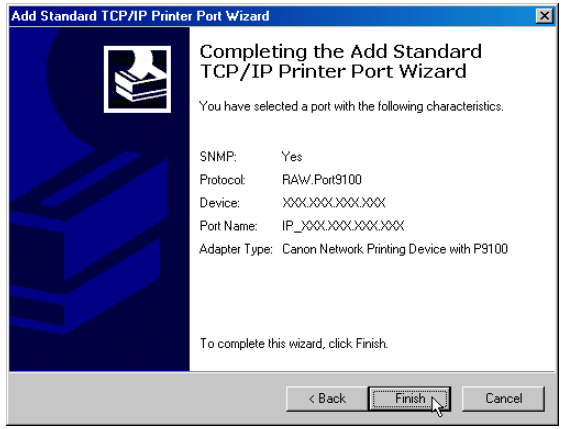
- Select “Standard TCP/IP Port” then click the OK button.



- When the Add Standard TCP/IP Printer Port Wizard appears, click the Next button.
- For “Printer Name or IP Address” enter the IP address of the printer, then click the Next button.


Add Standard TCP/IP Printer Port Wizard
Add Port
For which device do you want to add a port?
Enter the Printer Name or IP address, and a port name for the desired device.
Printer Name or IP Address:
XXX.XXX.XXX.XXX
Port Name:
IP_XXX.XXX.XXX.XXX
< Back
Next >
Cancel

- For “Adapter Type” confirm that “Canon Network Printing Device with P9100” is selected, then click the Finish button.


Add Standard TCP/IP Printer Port Wizard
Completing the Add Standard TCP/IP Printer Port Wizard
You have selected a port with the following characteristics.
SNMP: Yes
Protocol: RAW,Port9100
Device: XXX.XXX.XXX.XXX
Port Name: IP_XXX.XXX.XXX.XXX
Adapter Type: Canon Network Printing Device with P9100
To complete this wizard, click Finish.
< Back
Finish
Cancel

The port for the printer is added.

3 Check the Port Name selection and confirm that IP_xxx.xxx.xxx.xxx is selected, for the Printer Name enter the name of the printer, then click the Next button.

4 Follow the instructions on screen.

The printer driver installation begins.

The printer driver and printer port installation are completed after the system has finished restarting.

Important

- Adding the TCP/IP port enables SNMP as the standard. Do not change this setting because SNMP manages this board for the printer status manager.

■ Windows NT 4.0 LPD Connection

1 Confirm that “Microsoft TCP/IP Printing” is installed.

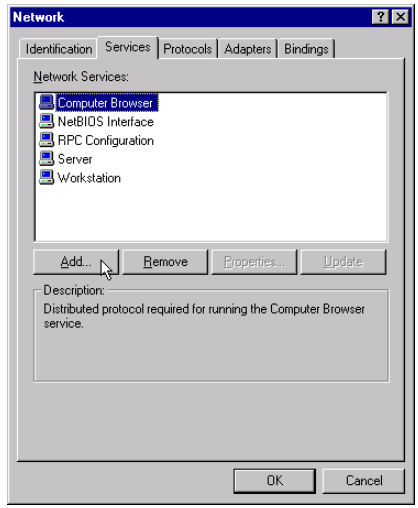
- On the desktop, click the Start button, point to Settings, then click Control Panel.
- Double-click the Network icon.
- Click the Services tab.

Note

- If “Microsoft TCP/IP Printing” is not displayed in the Network Services list, go to Step 2. If it is in the list, go to Step 3.

2 Add “Microsoft TCP/IP Printing” if it has not been installed.

- Click the Add button.



- In the Network Services list, click “Microsoft TCP/IP Printing”, then click the OK button.
- When the Windows NT setup disk is requested, mount it in the CD-ROM drive then continue.
- After the files are copied, the Network dialog box opens. Click the OK button.
- Click the Yes button to re-start Windows NT.

3 Follow the instructions in the Setup Guide provided with the printer to install the printer driver.

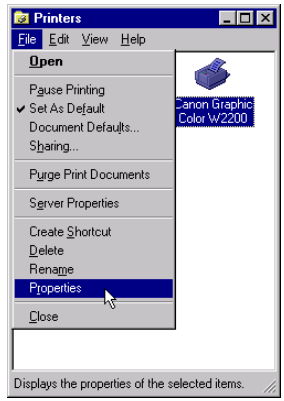
When the printer management selection screen opens, select My Computer. Do not select “Network Print Server”.

The port used by the printer changes after installation, so select LPT1 or any desired port.

4 Open the Printer Properties dialog box.

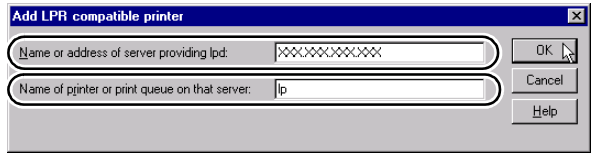
- On the desktop, click the Start button, point to Settings, then click Printers.

- Click the icon of the printer to be used for printing, then from the File menu select Properties.



5 Perform the print connection settings.

- Click the Ports tab.
- Click the Add Port button. The Printer Ports dialog box opens.
- In the “Available Printer Ports” list, click LPR Port, then click the New Port button.
- When the Add LPR compatible printer dialog box opens, enter the name or IP address into the “Name or address of server providing lpd” text box.
- Enter lp into the “Name of printer or print queue on that server” text box then click the OK button.



6 Click the OK button to enable the settings.

This completes the printer connection settings.

■ UNIX LPD Connection

The examples of entries and settings below are for the English operating system.

Note

- This section describes using LPD. For details about using FTP, see "Managing the Printer from a Computer" (→ P.2-33)

1 At a workstation log in as a super user.

2 Perform the settings for the spooling system.

- For Solaris 1.x

Add the following content to the `/etc/printcap` file:

<Print queue name>|<Comment>:\

:lp=<Special file device>:\

:sd=<Spool directory>:\

:rm=<Printer IP address or name>

Solaris.1x Sample Entry:

```
print_queue_name|comments:\
:lp=/var/spool/print_queue_name/.null:\
:sd=/var/spool/print_queue_name:\
:rm=printer_host_name
```

- For Solaris 2.x
  - Start the admintool utility.
  - Select Browse → Printers.
  - Select Edit → Add → Access to Printer.
  - For the Printer name and Print Server, enter the desired print queue name and printer IP address or name.
  - Select OK.

Note

- The Admintool utility is a software application provided with the operating system. For more details, refer to the operating system instructions.
- The procedures above are examples of setting procedures. These procedures may be different for your network environment.

This completes the computer settings.

IPP Connection Methods

■ Windows Me, Windows 98, Windows 95 IPP Connection

1 Install the IPP Client software provided by Microsoft for Windows Me, Windows 98, or Windows 95 and re-start the computer.

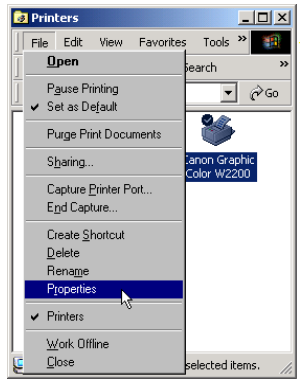
2 Install the printer driver. (→ Setup Guide)

When the printer connection screen opens, click Local Printer.

The port used by the printer changes after installation, so select LPT1 or any desired port.

3 Open the Printer Properties dialog box.

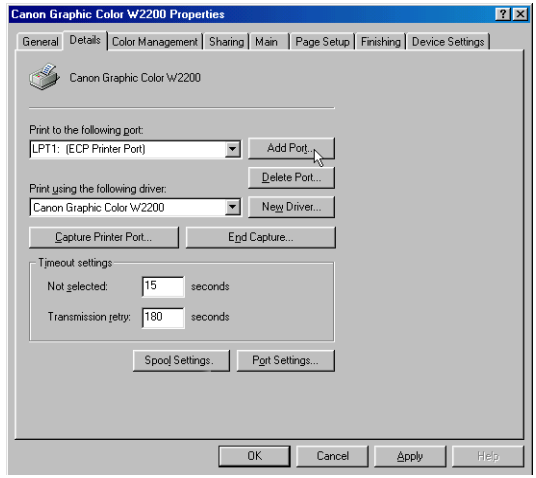
- On the desktop, click the Start button, point to settings, then click Printers.
- Click the icon of the printer to use, then from the File menu select Properties.



4 Perform the port settings.

- Click the Details tab.

- Click the Add Port button. The Add Port dialog box opens.



- Click the Network button.
- Enter the URL below for “Specify the network path to the printer”, then click the OK button. When you change the URL of the IPP for the printer setting, enter the modified URL.

`http://`<Printer IP address or name>`/printer`

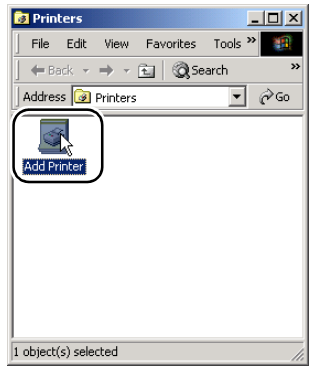
5 Click the OK button to enable the settings.

This completes the printer connection settings.

■ Windows XP, Windows 2000 IPP Connection

1 Start the Add New Printer Wizard.

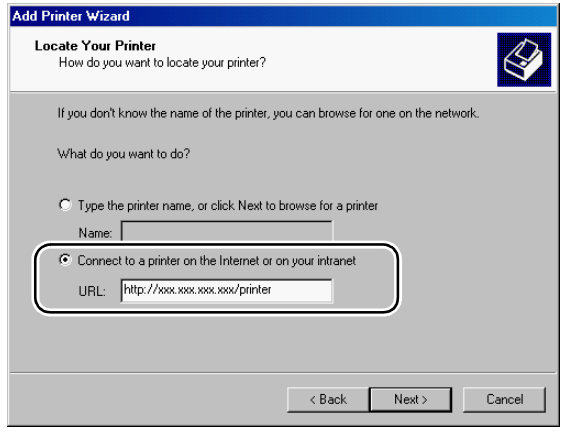
- On the desktop, click the Start button, point to Settings, then click Printers.
- Double-click the Add Printer icon.



2 Set the URL for the printer.

- Click the Next button.
- When the screen opens to select the printer connection, select “Network” then click the Next button.
- When the printer detection screen opens, select “Connect to a printer on the Internet or on your intranet”, then enter the URL in the URL text box. When you change the URL of the IPP for the printer setting, enter the modified URL.

`http://`<Printer IP address or name>`/printer`


Add Printer Wizard
Locate Your Printer
How do you want to locate your printer?
If you don't know the name of the printer, you can browse for one on the network.
What do you want to do?
Type the printer name, or click Next to browse for a printer
Name:
Connect to a printer on the Internet or on your intranet
URL: http://xxx.xxx.xxx.xxx/printer
< Back Next > Cancel

- When the manufacturer and printer name selection screen opens, click the Have Disk button, then specify the folder on the CD-ROM that holds the printer driver.

3 Follow the instructions on the screen to complete the installation.

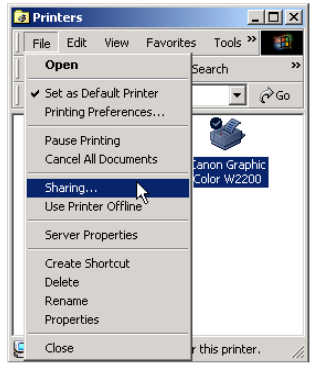
This completes the printer connection settings.

Setting the Printer for Sharing

Follow the procedure below to improve the efficiency of printer management by setting up a print server on a network with Windows XP, Windows 2000 or Windows NT. With a print server set on the network, all print jobs are managed by the print server. All the printer software can be installed once onto the representative print server so each computer connected to the network can install the printer drivers through the network.

1 Open the Sharing sheet of the Printer Properties dialog box.

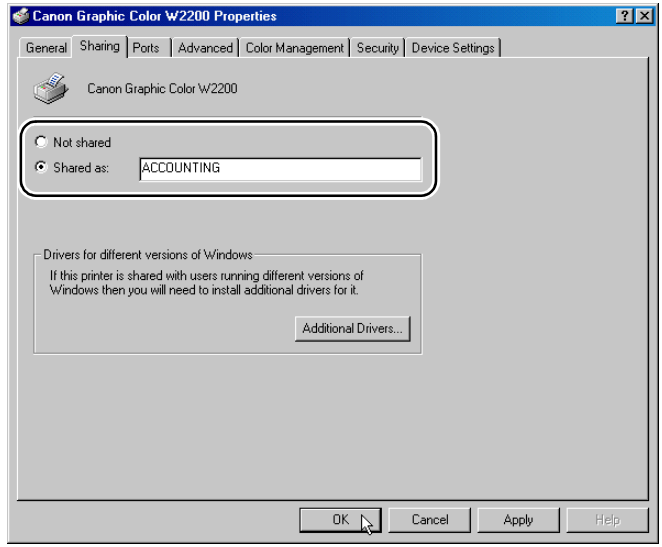
- On the desktop, click the Start button, point to Settings, then click Printers.
- Click the icon of the printer to use, then from the File menu select Sharing.



2 Perform the settings to share the printer.

- In the “Shared as” text box, enter the desired name for the printer.
- From Alternate Drivers select the name of the printer driver to install. (If you are not using Windows XP or Windows 2000, click the Additional Drivers button then select the printer driver to install.)

- Click the OK button. If alternate printer drivers are being installed, then a screen opens that allows you to select the location of the files. Mount the provided User Software CD-ROM and open the folder on the CD-ROM that holds the printer driver.



Important

- If you are using Windows NT 4.0, Service Pack 6 or later must be installed for Windows NT in order to use alternate drivers.

This completes setting the printer for sharing.

To install the printer driver on another computer, at the printer connection screen in the Printer Wizard just select “Network Printer” then select the name of the shared printer for the computer designated as the print server.

Note

- When the printer sharing settings have been performed for Windows XP or Windows 2000 where IIS is installed, and after the “DSE (Device Status Extension)” has been installed from the provided User Software CD-ROM, then you can use a Web Browser from a Client computer to display printer information and manage print jobs. For more details about how to install DSE, open the DSE folder on the User Software CD-ROM and read to the Readme.txt file.

Managing the Printer from a Computer

You can use the following software applications on the computer to check the printer status and perform printer settings:

- Web Browser (Remote UI) (→ P.2-33)
- FTP Client (→ P.2-33)

Managing the Printer with a Web Browser (Remote UI)

You can use the Remote UI function built into the network interface board to manage the printer with a Web Browser.
For more details about how to set up and use the Remote UI feature, see Step 1 of "Setting TCP/IP Protocol with a Web Browser (Remote UI)" (→ P.2-9)

Managing the Printer with an FTP Client

Follow the procedure below to enable managing the printer with the FTP client. You can also use the FTP client to print files from the printer, perform version updates of the printer firmware for the printer network module, and perform other important functions.

The examples of entries and settings below are for the English operating system.

1 Start at the MS-DOS prompt or command line.

2 Enter the following command:

`ftp` <Printer IP address>

3 Enter root as the user name and press the Enter key.

If a password has been set for the printer, enter the password.
If no password has been set, press the Enter key without entering a password.

When you have logged in from the root, execute the following commands:

- File print: `put` <Print filename> `PRINTER`
- Reset network interface board: `get reset`
- Acquire initial settings: `get defaults`
- Acquire current settings: `get config` <Filename (current settings)>

- Set network interface board with file settings: `put` <Filename (file settings)> `CONFIG`
- Update network interface board firmware: `put` <Firmware file name> `FLASH`
- Release FTP connection: `close`
- End FTP: `quit`
- Display command list: `remotehelp`

Important

- To print a binary file created by a Windows printer driver, print in the binary mode.

Note

- You can log in with spaces or with another user name other than root, but you can perform only operations other than settings.
- You cannot log in as "Anonymous".

Managing the Printer with E-mail Notification

You can use e-mail to notify you when a paper jam occurs, an ink tank runs out of ink, and so on. You can set e-mail notification to inform provide a partial status report of the printer for the device errors listed below:

- Paper jams, paper out, requests for another type of paper or special print media, or errors that require recycling the printer off and on.
- Errors that occur when consumables such as ink are exhausted and require replacement.

Important

- E-mail cannot inform you about some errors.
- When the number of e-mails exceeds 16 as the result of e-mail transmission failures, the older e-mails are deleted and not sent.
- E-mails are sent via the Web Browser to provide notification about the printer status, so you must perform the settings for e-mail notification. (→ "Setting Up the E-mail Notification Function", P.2-35)

Note

- You can use settings to have e-mail notification inform you only about the status of the specified printer.

1 Start the Web Browser, then enter the following URL for the Address, then press the Enter Key:

`http://`<Printer IP address or name>`/`

Sample Entry:

`http://XXX.XXX.XXX.XXX/`

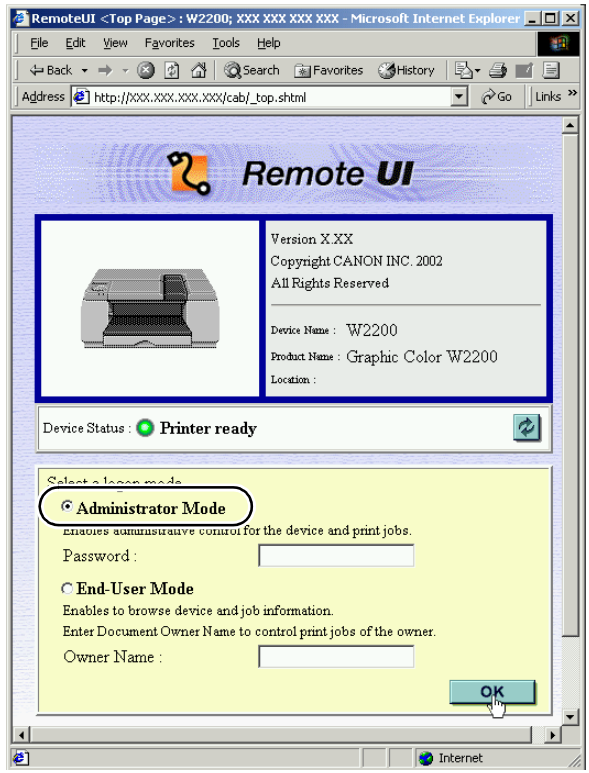
Important

- For the Web Browser, use Netscape Navigator/Communicator 4.04 or later, or use Internet Explorer 4.01SP1 or later. However, Netscape Navigator Version 6 or later is not compatible.
- If you are using TurboLinux 4.0, you cannot use Netscape Communicator 4.08 to set the printer. Use another version of a Web Browser.

Note

- If you have started the Remote UI with the printer name, confirm that the DNS environment and the board DNS settings are executed correctly.

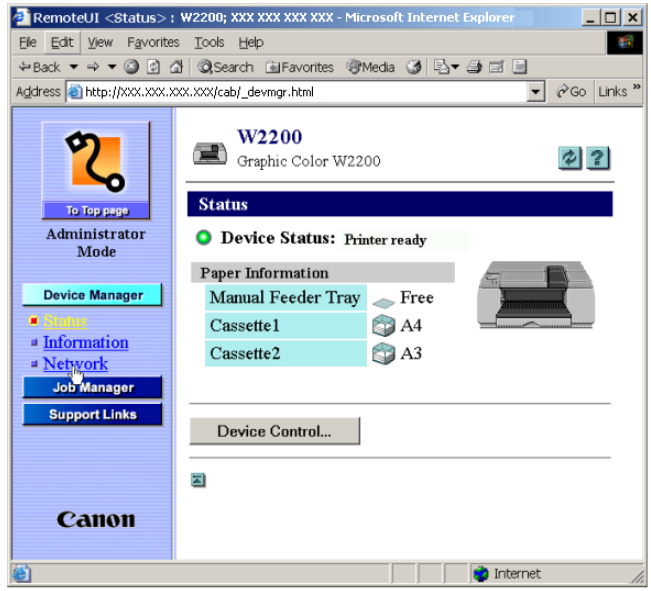
2 Click the Administrator Mode button and click the OK button.



Note

- If a password has been set for the printer, enter the password and click the OK button. If no password has been set, then a password entry is not required.

3 In the left panel under Device Manager, click Network.

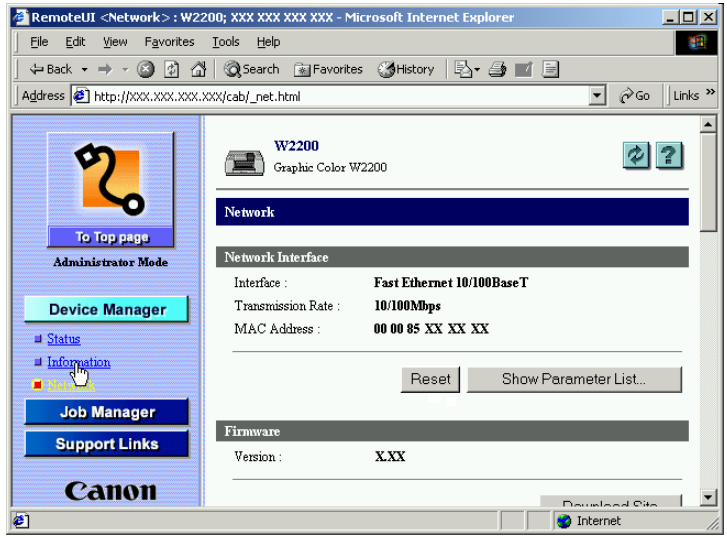


The Network page opens.

4 Confirm that the mail server address is entered correctly in the SMTP Server Address box for TCP/IP, and make sure that the posted domain name of the printer is entered correctly for the DNS Domain Name.

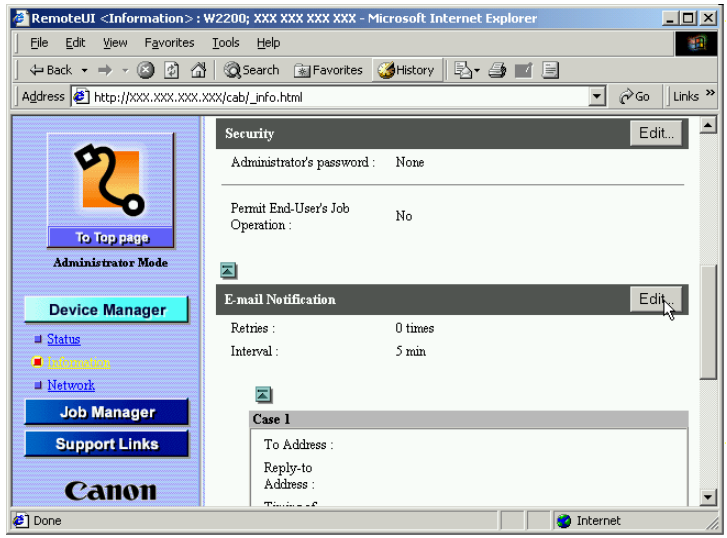
If the mail server address or the printer domain name entries are not correct, they must be corrected. (→ "Setting TCP/IP Protocol with a Web Browser (Remote UI)", P.2-9)

5 In the left panel under Device Manager, click the Information item.



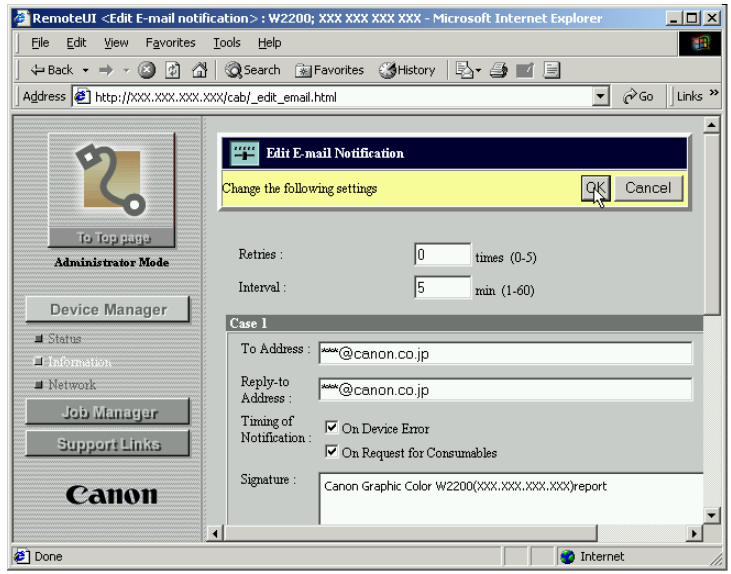
The Information page opens.

6 Click the Edit button to the right of “E-mail Notification”.



The Edit E-mail Notification page opens.

7 In the Retries text box enter the number of times the e-mail notification of the printer status is to re-try sending a failed transmission, and in the Interval text box enter (in seconds) the time interval between re-tries.



8 Perform the settings for Case 1.

To Address:

Enter the e-mail address of the person to receive the e-mail notification about the status of the printer. You can enter several mail addresses separated by one comma (,).

Reply-to Address:

Enter the address for the replay to the e-mail.

Timing of Notification:

Click the appropriate box to determine the condition for the e-mail notification.

Signature:

Enter the text for the signature to appear at the end of the e-mail notification.

9 If you want to receive the e-mail notification at an address other than the one entered for Case 1, or to receive the e-mail under conditions other than those specified for Case 1, then set Case 2.

10 Click the OK button.

11 In the left panel under Device Manager, click Network, then click the Reset button.

The settings are enabled when the network interface board is re-started.

This completes the settings for the e-mail notification function.

3 AppleTalk Network Settings (Macintosh)

This chapter describes the setting methods and procedure for connecting the printer to an AppleTalk network.

Procedures Required for an AppleTalk Network

Here is a summary of the procedures required to set the printer for use on an AppleTalk network.

1	Connect the Network Cable	→Setup Guide

Follow the instructions in the Setup Guide to connect the network cable.

2	Setting a Macintosh	→P.3-3

Confirm the network settings for the Macintosh.

3	Setting the Printer Protocols	→P.3-5

Normally, the printer can be used with AppleTalk protocol without any changes. Use the Web browser to select the name and zone settings after entering the IP address with the printer operation panel.

4	Installing the Printer Driverr	→P.3-10

Install the Macintosh printer driver.

Important

- Steps 1 and 3 above should be performed by the network system administrator.

Note

- This section describes the printer connection to a Macintosh computer equipped with a standard Ethernet port built in. If the printer is connected to an expansion network interface board, be sure to select the name of the port.

Setting a Macintosh

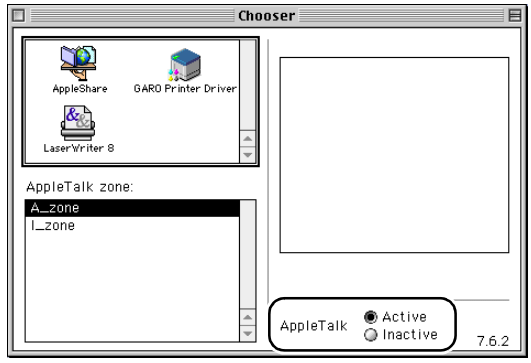
Setting the Network Functions

■ Mac OS 8.6/9.x

Use the Chooser and the AppleTalk item of the Control Panel to confirm the Macintosh network settings.

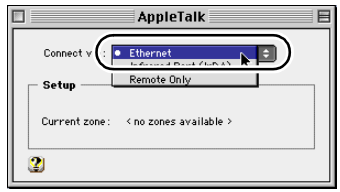
1 Confirm that AppleTalk can be used.

- From the Apple menu select Chooser.
- Confirm that Active is selected for AppleTalk. If the setting is Inactive, select Active.



2 Confirm that Ethernet is selected for the AppleTalk connection.

- Start AppleTalk on the Control Panel.
- Select Ethernet.



- Close AppleTalk to save the setting.

Important

- Be sure to select the Printer Port if Ethernet is connected via LocalTalk.

This completes the network settings for a Macintosh.

■ Mac OS X

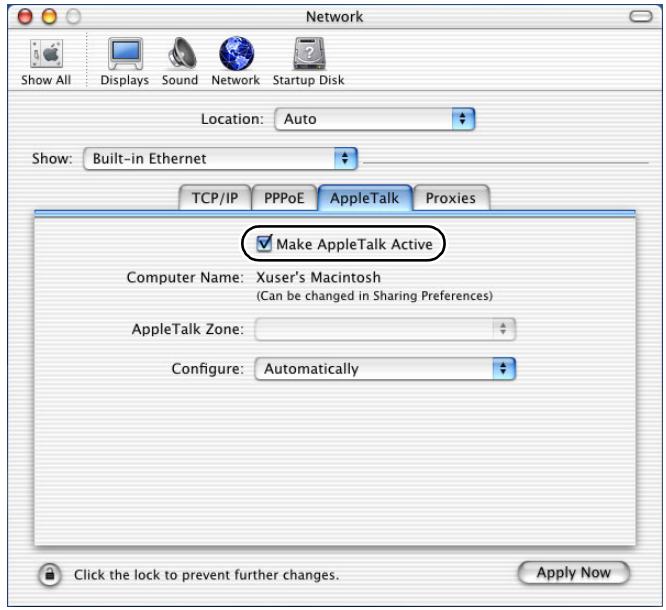
Confirm the AppleTalk settings with the Network setting of the System Preferences.

1 On the System Preferences panel, open Network.

2 For Display select Built-in Ethernet.

3 Select the AppleTalk sheet and confirm that Make AppleTalk Active is selected.

Select Active if it is not marked with a check mark.



4 Close Network to save the settings.

This completes the network settings for a Macintosh.

Setting the Printer Protocols

Use the Web browser (Remote UI) from your computer to perform the protocol settings. To perform the settings, first enter the IP address with the printer operation panel, then use the Web browser to set the protocol.
(→ Setup Guide)

1 Start the Web Browser, enter the following URL for the Address, then press the Enter key.

`http://`<Printer IP address or name>/

Example: `http://XXX.XXX.XXX.XXX/`

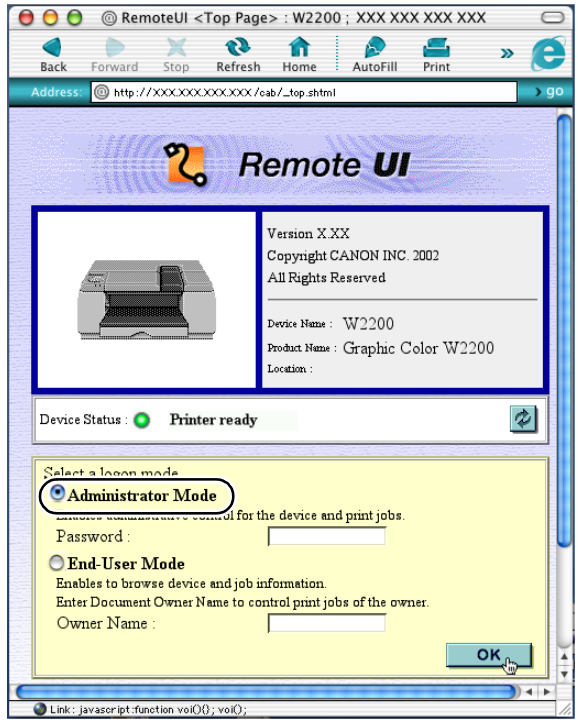
Important

- For the Web Browser, use Netscape Navigator/Communicator 4.04 or later, or use Internet Explorer 4.01SP1 or later. However, Netscape Navigator Version 6 or later is not compatible.
- A connection through a Proxy Server cannot be used. If you are using a network environment with a Proxy Server, use the "Proxies" server setting in the Web Browser to add the printer IP address to the "Exceptions" text box (the address not used by the Proxy Server). (Performing this setting may differ, depending on the network environment.)
- Use the Web Browser to enable JavaScript and Cookie so these features can be used.
- If more than one Remote UI is being used, then the most recently used settings remain enabled. Starting and using only one Remote UI at a time is recommended.

Note

- If you have started the Remote UI with the printer name, confirm that the DNS environment and the board DNS settings are executed correctly.

2 Click and select Administrator Mode then click the OK button.

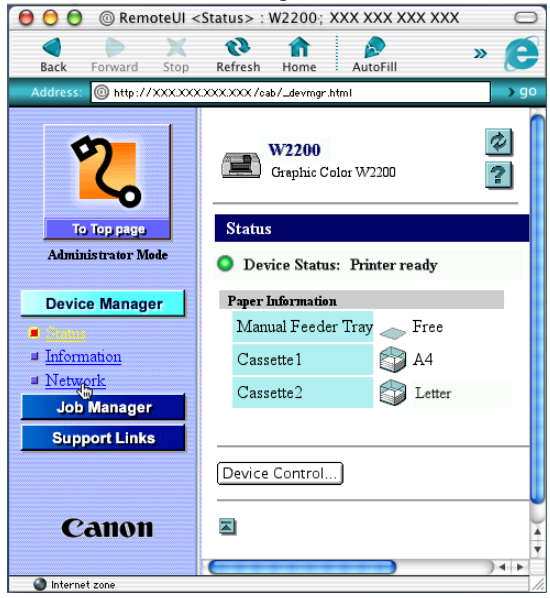


The Remote UI starts.

Note

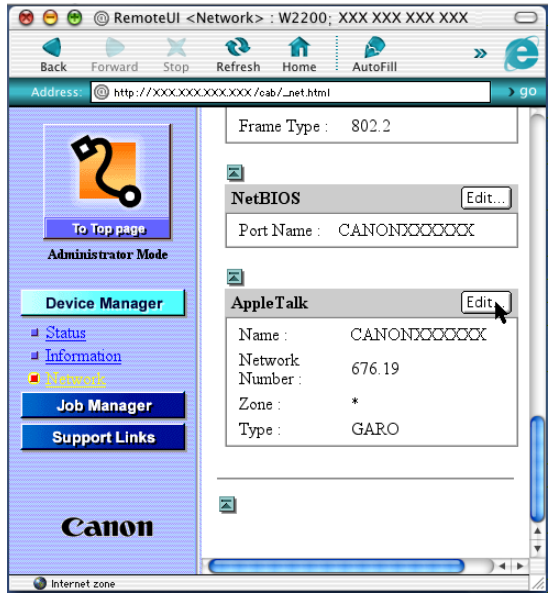
- If a password has been set for the printer, enter the password and click the OK button. If no password has been set, then a password entry is not required.

3 From the Device Manager menu on the left, select Network.



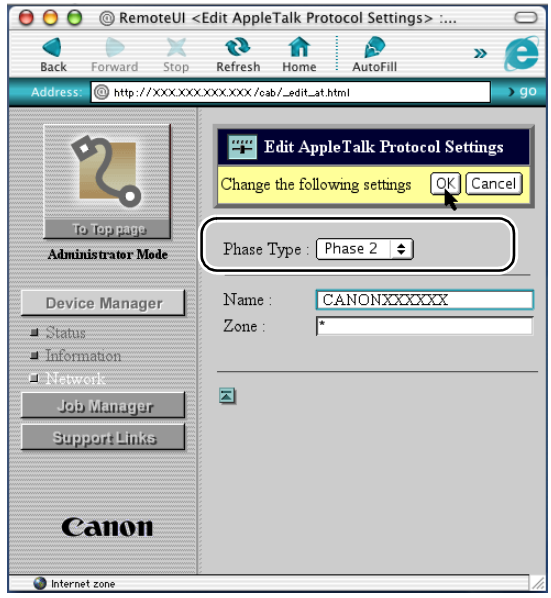
The Network page opens.

4 Click the Edit button to the right of AppleTalk.



The AppleTalk Protocol Settings page is displayed.

5 For the Phase Type item, select Phase 2.



Note

- If Disabled is selected, the printer will not be recognized on the AppleTalk network.

6 Enter the name of the printer in Name box.

Enter the printer name displayed in Chooser for Mac OS 8/9 or the name displayed in Print Center for Mac OS X.

Important

- If more than one printer is in the same zone, be sure to assign a unique name for each printer.

Note

- The initial name for the Name setting is "CANON + <last 6-digit number of the MAC address>", the name of the network interface board.
- When you change the name, you can enter a name up to 31 characters long. Spaces and the character codes (e.g. @, *, :, =) cannot be used in the name.

7 When a zone is set on the network, enter the name of the printer's zone.

If no zone is set, then leave the asterisk (*) entry as it is.

Important

- If a zone is set, the zone name must be entered. If the name of a zone where the printer is not located is entered, then the Macintosh computer can no longer recognize the printer. Contact your network system administrator for more details about the zone name.

8 Click the OK button.

This completes the printer protocol settings.

Installing the Printer Driver

After completing the printer protocol settings, install the printer driver on every Macintosh that will be used for printing and perform the print destination settings. The printer driver for the printer must be installed for printing. Install the printer driver. (→ Setup Guide)

Follow the instructions in the Setup Guide to install the printer driver. Selecting the printer in the Chooser completes the printer driver installation for Mac OS 8/9. For Mac OS X, open Print Center and use the Add Printer feature to add the printer and complete the printer driver installation.

4 NetWare® Settings (Windows)

The chapter describes the setting methods and procedures for connecting the printer to a NetWare® network.

Procedures Required for a NetWare® Network

Here is a summary of the procedures required to set the printer for use on a NetWare® network.

1	Connect the network cable	→Setup Guide

Follow the instructions in the Setup Guide to connect the network cable.

2	Setting the Printer Frame Type	→P.4-3

Set the frame type to select the printer protocol. You can perform this setting with the GARO Device Setup Utility (Canon software application provided with the printer) or you can use the printer operation panel.

3	Setting NetWare® Print Service	→P.4-6

Perform the settings for the NetWare® service. You can perform these settings on the computer with one of the following software applications:

• NWADMIN or PCONSOLE (Novell software application provided with NetWare®)

4	Setting NetWare® Printer Protocol	→P.4-11

Perform this procedure to set the printer protocol. You can perform these settings on the computer with one of the following software applications:

• Web Browser (Remote UI)
• FTP Client

5	Setting the Computer for NetWare®	→P.4-17

Perform these settings on every computer to be used with the printer.

Important

- Steps 1, 2, 3, 4 should be performed by the network system administrator.

Setting the Printer Frame Type

Before setting the printer protocol, you must follow the procedure below to set the printer frame type to enable communication between the computer in use and the printer. Use the software application below to set the IP address.

- GARO Device Setup Utility (→ P.4-4)

Important

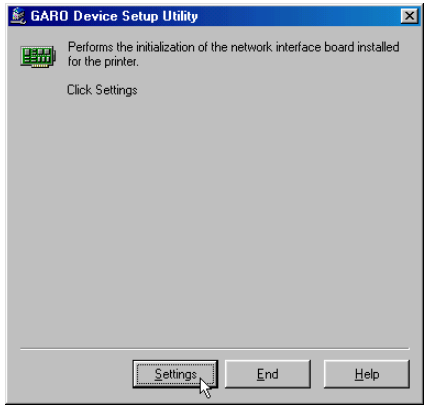
- The GARO Device Setup Utility must be installed on your computer in order to use this utility to make the settings. Ask your system administrator to install the GARO Device Setup Utility on your computer. (→ Setup Guide)
- Before setting the Frame Type, confirm that the printer is switched on and connected to the network.
- The MAC address is required to perform the setting with the GARO Device Setup Utility or the ARP/PING command. If you need to confirm the MAC address, use the printer operation panel to print a Status Print or Ext. I/F Print.
  1. Press the Online button. The Online lamp switches off.
  2. Press the Cancel Job/Utility button.
  3. Press < or > to select Status Print or Ext. I/F Print then press ∨.

Setting the frame type with GARO Device Setup Utility

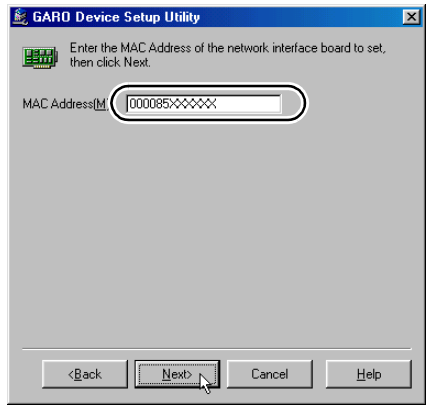
If you are using Windows, use the GARO Device Setup Utility, the software utility provided with the printer, to perform the printer network settings.

1 On the desktop, click the Start button, point to Programs, then click GARO Device Setup Utility.

2 Click the Settings button.

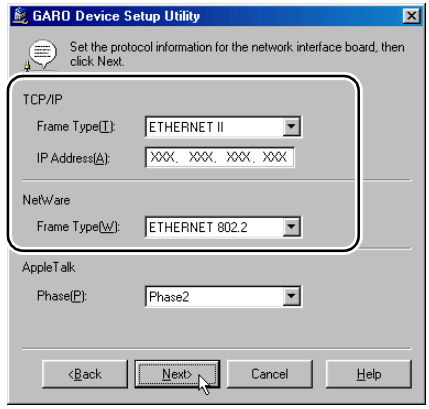


3 Enter the MAC address into the MAC Address box then click the Next button.



The utility searches for the printer on the network and when the printer is found, the protocol settings dialog box opens.

4 For the NetWare Frame Type select the frame type in use from the list, for TCP/IP Frame Type select ETHERNET II, for IP Address enter the IP address assigned to the printer, then click the Next button.



Note

- The IP address setting is required here to enable the printer protocol setting to be conducted with the Web browser (Remote UI).

5 Confirm the settings then click the Finish button.

The printer frame type protocol settings are changed.

Setting NetWare® Print Service

In order to print on a NetWare® network, you must set the printer server, queue, and other settings. You can use the software applications below to perform the print service settings from the computer that you are using.

- NWADMIN or PCONSOLE (Novell software applications provided with NetWare®)

Important

- If you perform the print service settings with NWADMIN, Novell Client (the Novell NetWare® client) must be installed as the client software application.
- The following procedure describes the print service settings for NetWare®. The procedure may be slightly different for your network environment.

Types of Print Services

Before performing the print service settings, be sure to read the description below then select the printer service type.

Note

- You can also NDPS as the print service for NetWare®. If you use NDPS as the print service, for the gateway use the Novell printer gateway provided by Novell. The setup procedure for NDPS is not described in this manual, so please refer to your NetWare® instructions for details.

- NDS (Novell Directory Service) and Bindery

  Both NDS and Bindery are compatible. You can select either, depending on the requirements of your network environment.

- Queue server mode and remote printer mode

  Queue server mode and remote printer mode are both compatible.

- Queue server mode

  When queue server mode is used, the hardware and software for other print servers is not required because queue server mode contains all the print server functions. In NDS queue server mode (NDS PServer), the NDS print server is used to print. In the bindery queue server mode (Bindery PServer), the bindery print server is used to print. In the queue server mode, one NetWare® license is required for every network interface board used in the network.

- Remote printer mode

  When remote printer mode is used, the printer is controlled by the NetWare® print server, so a NetWare® print server is required. An NDS print server is used to print in the NDS remote printer mode (NPrinter), and a bindery print server is used to print in the bindery remote printer mode (RPrinter).

Setting Up a NetWare® Server with NWADMIN and PCONSOLE

■ Using NDS Queue Server Mode/Remote Printer Mode

1 Log into NetWare® as the System Administrator, or as a user with equivalent access rights, then start NWADMIN.

2 Execute a quick setup.

- From the Tools menu select Print Services Quick Setup.
- For Print Server name enter the desired name. To use an existing name, click the button on the right, then select the name from the list.
- For Name of the printer, enter the desired name.
- To use the queue server mode, select Other/Unknown for Type. To use the remote printer mode, select Parallel for Type, click the Communication button, select LPT1 for Port, then select Manual Load for Connection type.
- For Name of the print queue, enter the desired name.
- For Volume, enter the volume object (the physical volume to be designated on the network) that the queue will be created. Click the button on the right and select it from the list.
- Make the other settings, then click the OK button.

Important

- If your print service is queue server mode, don't set a password for the print server.

Note

- Take a note to record the print server name. The printer server name will be required when you perform the printer protocol settings.
- When a quick setup is executed, the printer is assigned the number "0". To use the printer in queue server mode, do not change "0" to any other number.

3 To use the remote printer mode, use the following procedure to start the print server.

- To use the NetWare® file server as the print server, on the file server enter LOAD PSERVER.NLM then press the Enter key.

Note

- This procedure is not required for the queue server mode.

This completes the settings for NetWare® Print Service. Now, you are ready to set the printer protocol settings. (→ "Setting NetWare® Printer Protocol" P.4-11)

■ Using Bindery Queue Server Mode/Remote Printer Mode

1 Log into NetWare® as the Supervisor, then start PCONSOLE.

2 Follow the procedure below to create the print server if one has not been created.

- From Available Options, select Quick Setup, then press the Enter key.
- Enter the name of the print server to create and enter the names of the new printer and the queue.

Important

- If your print service is queue server mode, don't set a password for the print server.

Note

- Take a note to record the print server name. The printer server name will be required when you perform the printer protocol settings.

3 Set the printer type.

- To use the queue server mode, select Other/Unknown for Printer type. To use the remote printer mode, select Parallel for Printer type, then select Manual Load for Location.
- Press the ESC key.
- When the confirmation box is displayed, click Yes then press the Enter key.

4 Press ESC several times to display the confirmation to close PCONSOLE, then click Yes to close PCONSOLE.

This completes the settings for NetWare® Print Service. Now, you are ready to set the printer protocol settings. (→ "Setting NetWare® Printer Protocol" P.4-11)

Setting NetWare® Printer Protocol

You can use one of the software applications listed below to perform the printer protocol settings. Use whichever method is easiest:

- Web Browser (Remote UI) (→ P.4-11)
- FTP Client (→ Chapter 2, "Setting TCP/IP Protocol with FTP Client", P.2-15)

Important

The method described here is using Web Browser to perform the printer protocol settings.

1 Start the Web Browser, enter the following URL for the Address, then press the Enter key.

`http://`<Printer IP address or name>/

Example: `http://XXX.XXX.XXX.XXX/`

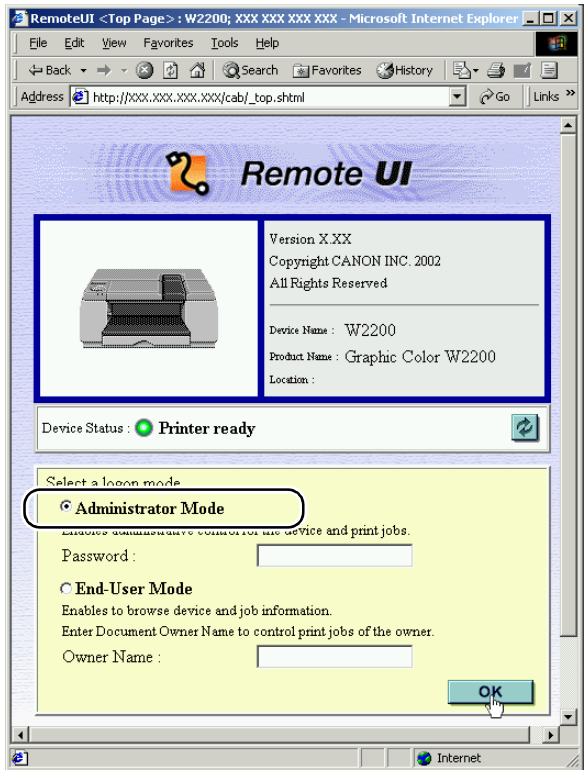
Important

- For the Web Browser, use Netscape Navigator/Communicator 4.04 or later, or use Internet Explorer 4.01SP1 or later. However, Netscape Navigator Version 6 or later is not compatible.
- A connection through a Proxy Server cannot be used. If you are using a network environment with a Proxy Server, use the "Proxies" server setting in the Web Browser to add the printer IP address to the "Exceptions" text box (the address not used by the Proxy Server). (Performing this setting may differ, depending on the network environment.)
- Use the Web Browser to enable JavaScript and Cookie so these features can be used.
- If more than one Remote UI is being used, then the most recently used settings remain enabled. Starting and using only one Remote UI at a time is recommended.

Note

- If you have started the Remote UI with the printer name, confirm that the DNS environment and the board DNS settings are executed correctly.
- If the RPrinter/NPrinter print history is displayed after the Remote UI, and then the E Remote UI start up, the Document Name and User information cannot be acquired. Therefore, only "Unidentified" and "RPRINTER/NPRINTER" are displayed for the Document Name and User settings.

2 Click and select Administrator Mode then click the OK button.

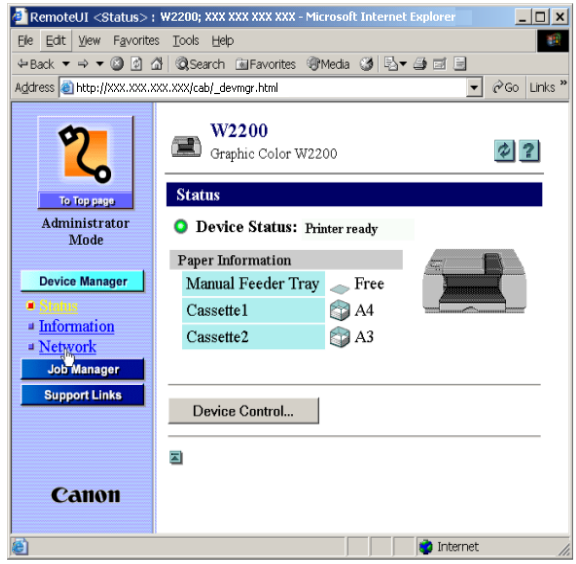


The Remote UI starts.

Note

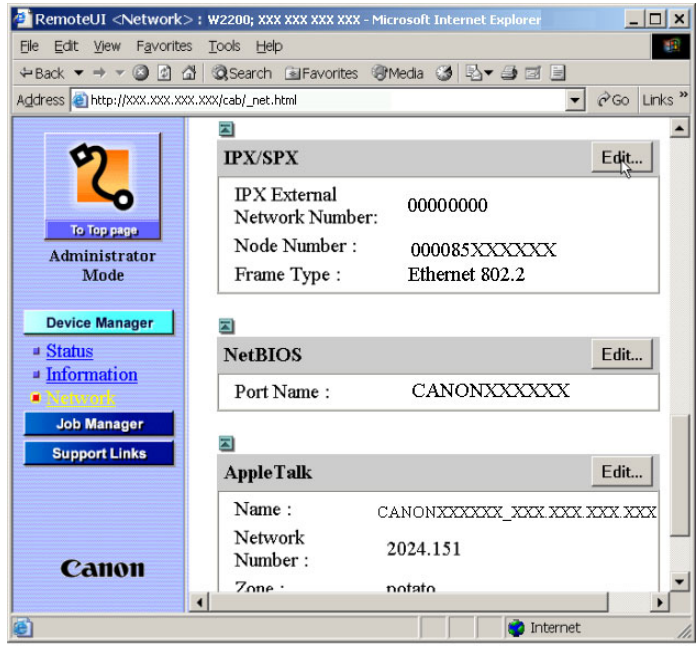
- If a password has been set for the printer, enter the password and click the OK button. If no password has been set, then a password entry is not required.

3 From the Device Manager menu on the left, select Network.



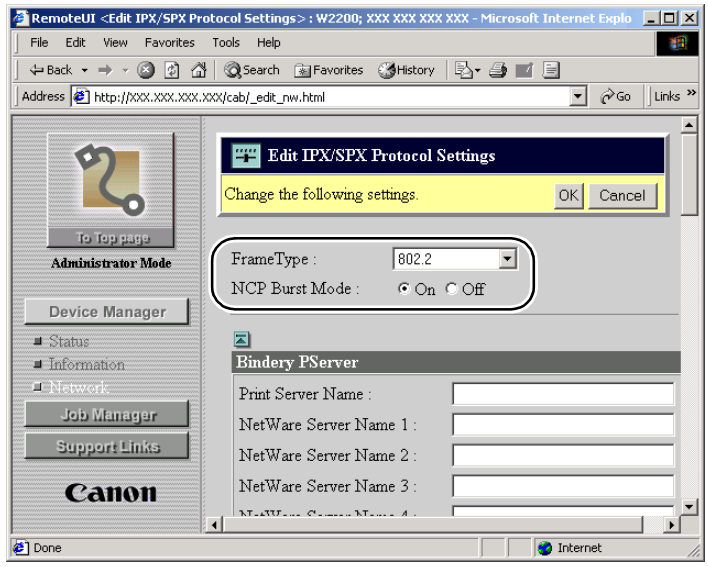
The Network page opens.

4 Click the Edit button to the right of IPX/SPX.



The Edit NetWare® settings page opens.

5 Check the Frame Type box and make sure the setting is correct for your NetWare® network.



6 If you intend to use the burst mode, select ON for NCP Burst Mode.

Note

- The burst mode is used in the queue server mode to transfer data rapidly at very high speed during printing.
- Normally, leave this setting on.

7 Perform the following procedure requred for your print service selection.

- Bindery PServer selected: Queue Server Mode (Using a Bindery Print Server)
  - For Print Server Name, enter the name of the print server created in “Setting NetWare® Print Service” (→ P.4-6).
  - For NetWare® Server Name x, enter the file server name.
  - Set value for Polling Interval. Set the interval that the printer will confirm with the NetWare® print queue.

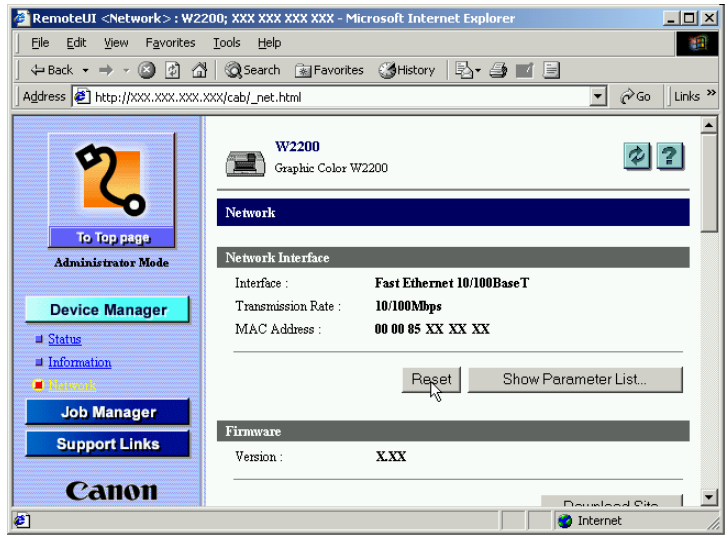
- NDS PServer Selected: Queue Server Mode (Using an NDS Print Server)
  - For Print Server Name, enter the name of the print server created in “Setting NetWare® Print Service” (→ P.4-6).
  - For NDS Tree Name, enter the NDS tree name of the print server.
  - Set value for Polling Interval. Set the interval that the printer will confirm with the NetWare® print queue.
- R Printer Selected: Remote Printer Mode (Using a Bindery Print Server)
  - For Print Server Name x, enter the name of the print server created in “Setting NetWare® Print Service” (→ P.4-6).
  - For Printer Number x, enter the same printer number entered in “Setting NetWare® Print Service” (→ P.4-6).
- N Printer Selected: Remote Printer Mode (Using NDS Print server)
  - For Print Server Name x, enter the name of the print server created in “Setting NetWare® Print Service” (→ P.4-6).
  - For Printer Number x, enter the same printer number entered in “Setting NetWare® Print Service” (→ P.4-6).

Note

- If you select Bindery PServer, you can set the file servers up to 16, and you must specify identical print server on each file server.
- If you select R Printer or N Printer, you can set the print servers up to 4.

8 Click the OK button.

9 When you return to Network of Device Manager, click the Reset button.



The new settings are enabled when the network interface board restarts.

This completes the NetWare® protocol settings.

Setting the Computer for NetWare®

Perform these settings for each computer after you have selected the NetWare® print service and protocol.

Connecting to a NetWare® Network

Install the NetWare® Client software on every computer to be used for printing then log onto the NetWare® server or tree. For details about the how to connect, refer to your NetWare® or operating system instructions.

Installing the Printer Driver

The printer driver is required for printing. Install the printer driver retaining the network administrator's instruction.

When you install the printer driver, be sure to select Network Printer and select the print queue that you created with the NetWare® print service settings.

Setting the Printer Port

On the desktop, click the Start button, point to Settings, then click Printers. Click the printer icon, then from the File menu select Properties. Click the Details or Port tab, then for the destination port select the print queue that you created with the NetWare® print service settings. (→ P.4-6)

Note

- This procedure is not required if you selected the port connection during the printer driver installation.

5 NetBIOS/NetBEUI Network Settings (Windows Me/Windows 98/Windows 95)

This chapter describes the setting methods and procedures for connecting the printer to a NetBIOS/NetBEUI network.

Procedures Required for a NetBIOS/NetBEUI Network

Here is a summary of the procedures required to set the printer for use on a NetBIOS/NetBEUI network.

1	Connect the network cable	→Setup Guide

Follow the instructions in the Setup Guide to connect the network cable.

2	Windows Settings for a NetBIOS/NetBEUI Network	→P.5-3

Perform the settings on every computer in the network to be used for printing.

Important

- This printer is not compatible with NetBIOS over TCP/IP (NetBT). If you are using TCP/IP in the network environment, use the TCP/IP protocol to print. (→ Chapter 2 “TCP/IP Network Settings (Windows)”)

Windows Settings for a NetBIOS/NetBEUI Network

Perform the procedure below for every computer.

NetBIOS/NetBEUI Network Connection Methods

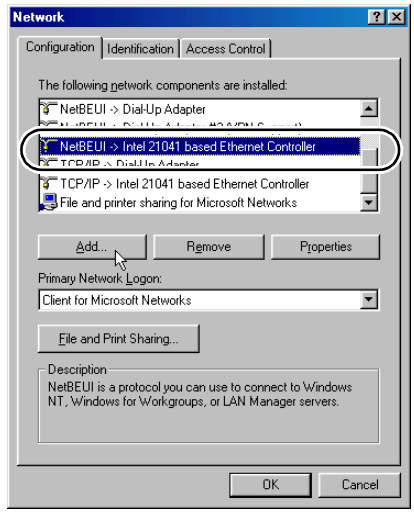
NetBEUI Client software must be installed on every computer that will be used for printing on the network. Follow the procedure below to confirm whether NetBEUI Client has been installed on a computer.

1 On the desktop, click the Start button, point to Settings, then click Control Panel.

2 Double-click the Network icon.

3 Confirm that NetBEUI appears in the list under “The following network components are installed”.

If NetBEUI has not been installed, click the Add button and install it.



Installing the Printer Driver

The printer driver is required for printing. Install the printer driver. (→ Setup Guide).

During installation use Add Printer on the Local or Network Printer screen to select Local Printer. Do not select Network Printer.

The port used by the printer changes after installation, so select LPT1 or any desired port.

Setting the Printer Port

Follow the procedure below to select the port for the printer connection.

1 Install the NetBIOS/NetBEUI Port Monitor from the provided User Software CD-ROM.

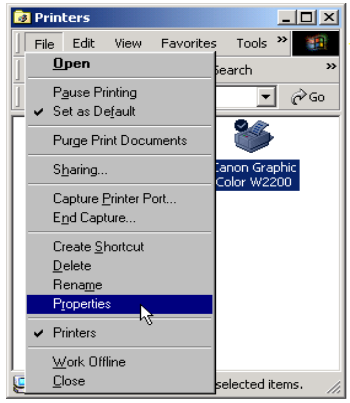
- Mount the provided User Software CD-ROM in the CD-ROM drive.
- On the desktop, double-click the My Computer icon, double-click the CD-ROM Disk icon, then from the File menu select Open.
- Open the Portmon folder.
- Double-click the Setup (Setup.exe) file.
- The installation program begins. Follow the instructions on the screen to complete the installation.

Note

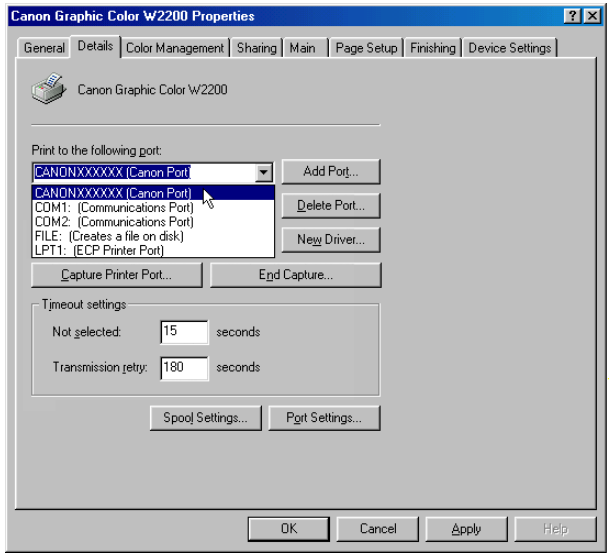
- In some operating environments, the Setup Menu window appears as soon as the User Software CD-ROM is mounted in the CD-ROM drive. If this occurs, click the Quit button then follow the procedure above.

2 Open the Printer Properties dialog box.

- On the desktop, click the Start button, point to setting, then click Printers.
- Click the icon of the printer to be used, then from the File menu select Properties.



3 In the list (“Printer to the following port”) click and select “CANONxxxxxx (Canon Port).



Note

- The 6-digit number “xxxxxx” denotes the MAC address of the network interface board in the printer. To confirm the MAC address, execute “Status Print” or “Ext. I/F Print” with the printer operation panel. (→ Setup Guide)
- If “CANONxxxxxx (Canon Port)” is not in the list, see Chapter 6 “When You Cannot Print” (→ P.6-3)

4 Click the OK button to enable the settings.

This completes the settings for a computer to be used for printing.

6 Troubleshooting

This chapter describes how to solve problems that may occur during operation of the printer.

When You Cannot Use GARO Device Setup Utility

This section describes how to solve problems with the GARO Device Setup Utility.

GARO Device Setup Utility does not recognize printer

Problem 1: The printer is not switched on.

Solution: Check the printer power cord and the connection to the power source, then press the Power button on the printer.

Problem 2: The printer LAN port and cable are not connected correctly.

Solution: Confirm that the connection of the cable that connects the printer to the network is secure, then press the Power button to cycle the printer off and on again. (→ Setup Guide).

Problem 3: The computer and the printer are not connected on the same subnet.

Solution: Connect the computer and the printer with same hub.

When You Cannot Print

This section describes how to solve printing problems.

Cannot print from a TCP/IP network.

Problem 1: The LAN port and network cable are not connected correctly.

Solution: Make sure that the correct type of cable is used to connect the printer to the network. Cycle the printer off and on then try again. (→ Setup Guide)

Problem 2: The TCP/IP network is not set correctly.

Solution: Make sure that the Frame Type and IP Address are set correctly. If you are setting an IP address for use with DHCP, BOOTP, or RARP, make sure that DHCP, BOOTP, or RARP is operating.

Problem 3: The computer settings on the computer used for printing are not set correctly.

Solution: Check the following points:

- Make sure that the correct printer driver has been installed. In order to perform print jobs with Windows, the correct printer driver and the LPR port must be installed for each operating system. (→ Setup Guide)
- Make sure that correct printer port (print output destination) has been selected for the printer to be used for printing. In the Control Panel open the printer folder and then check the output destination.
- Make sure that the setting to finish printing faster has been selected for Spool Setting. In the Control Panel, open the Printer folder and then check Spool Setting with the Properties command in the File menu.

Problem 4: The print file name is too long.

Solution: Normally, LPR (with Windows NT: Microsoft TCP/IP printing) sends a job file name, created from the name of the application software used for printing or the name of printed file. However, if the length of this job name exceeds 255 bytes, the job cannot be sent normally. To correct this, shorten the file name of the file selected for printing.

Cannot print from an AppleTalk network.

Problem 1: The LAN port and network cable are not connected correctly.

Solution: Make sure that the correct type of cable is used to connect the printer to the network. Cycle the printer off and on then try again. (→Setup Guide)

Problem 2: The AppleTalk network is not set correctly.

Solution: With the Remote UI confirm that each AppleTalk item is set correctly. Pay special attention to the following settings:

- Phase Type: A phase type must be enabled.
- Zone: The name of the zone where the printer is located must be entered.

Problem 3: The settings for the computer used for printing are not set correctly.

Solution: If you are using Mac OS 8.6/9.x, confirm the following points:

- Make sure that the correct printer driver is installed in the Chooser.
- In the Chooser, make sure that the correct printer is selected as the print destination.
- In the Chooser, make sure that AppleTalk is active.
- In the AppleTalk item of the Control Panel, make sure that Built-in Ethernet is selected as the AppleTalk connection method. If network interface board has been added to the Macintosh, make sure that the correct name of the port where the printer is connected is selected.

Solution: If you are using Mac OS X, confirm the following points:

- Make sure AppleTalk is active for the Built-in Ethernet setting under Network on the System Environment Setting panel.
- Make sure that printer driver for this printer is installed correctly.
- In the Print Center confirm that this printer is selected as the default printer.

Cannot print from a NetWare® network.

Problem 1: The LAN port and network cable are not connected correctly.

Solution: Check the following points then cycle the printer off and on.
Make sure that the correct type of cable is used to connect the printer to the network. Cycle the printer off and on then try again. (→Setup Guide)

Problem 2: The NetWare® network is not set correctly.

Solution: Check the following points:

- Make sure that the NetWare® file server is running.
- Make sure that sufficient disk space is available on the NetWare® file server. If sufficient space is not available, then large print jobs cannot execute.
- Start NWADMIN, or PCONSOLE and confirm (1) that the print service is set correctly, and (2) that the print queue has been enabled for use. (→"Setting NetWare® Print Service" P.4-6)
- Make sure that the network settings for the printer are correct. (→ "Setting the Printer Frame Type" P.4-3, "Setting NetWare® Printer Protocol" P.4-11)
  Check the following important points:
  - Confirm that the Frame Type selection specifies an enabled frame type.

Problem 3: The computer settings are not correct on the computer used for printing.

Solution: Check the following points:

- Make sure that the correct printer driver has been installed. In order to perform print jobs, the correct printer driver must be installed for each operating system. (→ Setup Guide)
- Make sure that correct printer port has been selected for the printer to be used for printing. In the Control Panel open the Printer folder and then check the connection with the Properties command in the File menu.

Problem 4: A print job data stream cannot be sent from the NetWare® server to a printer in another subnet.

Solution: When a print job data stream is sent from the NetWare® server, the data is sent in the NCP burst mode, and the data transfer to a printer on another subnet may fail, depending on the network environment that you are using. In this case, at the printer protocol setting, set the NCP burst mode to off.

Problem 5: When using the Queue Server Mode, the Printer Type setting appears set for Parallel.

Solution: Select Other/Unknown for the Printer Type setting.

Cannot print from a NetBIOS/NetBEUI network, or the name of a port is not displayed for "Print to the following port".

Problem 1: The network interface board and network cable are not connected correctly.

Solution: Check the following points then cycle the printer off and on.

- Make sure that the correct type of cable is used to connect the printer to the network. (→ Setup Guide)

Problem 2: The computer used for printing and the printer are on different subnets.

Solution: This printer cannot execute a print job using NetBEUI protocol on a network where there is a router between the computer used for printing and the printer. Use another protocol to execute the print job, or send the print job to a printer where the print job is not sent through a router.

Problem 3: The settings for the computer used for printing are not set correctly.

Solution: Check the following points:

- Make sure that the correct printer driver has been installed. (→ Setup Guide)
- Make sure that correct printer port (print output destination) has been selected for the printer to be used for printing. In the Control Panel open the printer folder and then check the output destination.
- Make sure that the setting to finish printing faster has been selected for Spool Setting. In the Control Panel, open the Printer folder and then check Spool Setting with the Properties command in the File menu.

7 Other Important Information

This chapter contains additional information for your reference.

Initializing Network Settings

Follow the procedure below to the printer operation panel to restore all the network settings to the default values set before shipping the printer from the factory.

Note

- You can use the printer operation panel to restore the network default settings or you can use one of these software applications:
  - Web Browser (Remote UI):
    For details, refer to the Web Browser online Help.
  - FTP Client:
    For details see “Managing the Printer with an FTP Client” (→ P.2-33)

1 On the printer operation panel, press the Online button. The Online lamp goes off.

2 Press the Setup button.

3 Press < or > to select the items below then press ∨.
Set Interface → Ext. Network → Init. Settings

4 When you see “Execute?” displayed, press ∨.

List of Network Settings

If you are using a Web Browser (Remote UI), or FTP Client, you can use these applications to change settings of the network interface board. The settings that can be changed are listed in the tables below.

Note

- In the tables below, the information enclosed with parentheses denote items for FTP Client. For example:
  - Device name (DEVICE_NAME):
    "Device name" denotes the item for the Web Browser, and "DEVICE_NAME" denotes the item in the Config file for FTP Client.

■ General Settings

Item	Description	Initial Value
Device Name (DEVICE_NAME)	Device name (Range: 0 to 32 chars.)	Blank
Location (SYS_LOC)	Device location (Range: 0 to 32 chars.)	Blank
Administrator (SYS_CONTACT)	Name of Administrator for the device (Range: 0 to 32 chars.)	Blank
Phone (SYS_TEL_NUMBER)	Telephone number of the Administrator (Range: 0 to 32 chars.)	Blank
Comment (E-mail) (SYS_COMMENT)	Administrator Comments (Range: 0 to 32 chars.)	Blank
Password (ROOT_PWD)	Device password (Range: 0 to 15 chars.)	Blank
User Permission (USER_JOB_CONT)	Determines whether a user has permission to execute print jobs.	Off
E-Mail Retry (EMAIL_RETRY)	The maximum number of retries attempted after failure of an e-mail transmission.	0
Retry Interval (EMAIL_DELAY)	The time interval between retries after failure of an e-mail transmission.	5
To: Address (EMAIL_ADDR)	The addresses where e-mail notifications are sent. (Address length: 0 to 128 chars.) Maximum number of addresses: 2	Blank
Reply to: Address (EMAIL_REPLY)	The addresses where replies to e-mail notifications are sent. (Address length: 0 to 128 chars.) Maximum number of addresses: 2	Blank
Timing of Notification (EMAIL_NOTIFY)	Determines the condition under which the e-mail notification is sent. Max.: 2 allowed	All Off

Item	Description	Initial Value
Signature (EMAIL_SIG)	Text for the signature to appear at the end of the e-mail notification. (Text Range: 0 to 256 chars., 2 lines allowed) Max.: 2 signatures allowed.	Blank
Support Link Name (LINK_NAME)	Name of site displayed in the support link page of the Remote UI. (Range: 0 to 32 chars.) Max.: 2 signatures allowed.	Blank
Support URL (LINK_URL)	URL displayed in the support link page of the Remote UI. (Range: 0 to 128 chars.) Max.: 2 allowed	Blank
Support Comment (LINK_COMMENT)	Comment displayed in the support link page of the Remote UI. (Range: 0 to 64 chars.) Max.: 2 allowed	Blank
Download Link Site Name (DOWNLOAD_SITE_NAME)	Name of the site displayed in the download site page of the Remote UI. (Range: 0 to 32 chars.)	Download Service
Download Site URL (DOWNLOAD_SITE_URL)	URL displayed in the download site page of the Remote UI. (Range: 0 to 128 chars.)	Blank
Download Site Comment (DOWNLOAD_SITE_COMMENT)	Comment displayed in the download site page of the Remote UI. (Range: 0 to 64 chars.)	Network firmware update

■ TCP/IP Settings

Item	Description	Initial Value
Frame Type (TCP_FRAME_TYPE)	The frame type used by TCP/IP.	Ethernet II
Address for DHCP (DHCP_ENB)	The setting in the IP address that determines whether DHCP is used.	Off
Address for BOOTP (BOOTP_ENB)	The setting in the IP address that determines whether BOOTP is used.	Off
Address for RARP (RARP_ENB)	The setting in the IP address that determines whether RARP is used.	Off
IP Address (INT_ADDR)	The IP address of the printer.	192.168.0.215
Subnet Mask (NET_MASK)	The subnet mask.	0.0.0.0
Gateway Address (DEF_ROUT)	The gateway address.	0.0.0.0
IPP URI (IPP_PRT_URI)	The URI for printing with IPP. (Range: 1 to 255 chars.)	printer
RAW Bi-directional Transfer (RAW_BIDIR_ENB)	Determines whether bi-directional data transfer is used during RAW printing.	Off
DNS Server Address (DNS_ADDR)	The IP address of the DNS server.	0.0.0.0
DNS Dynamic Update (DDNS_ENB)	Determines whether the main device is registered dynamically at the DNS.	Off
DNS Host Name (HOST_NAME)	The host name of the main device. (Range: 0 to 63 chars.)	Blank
DNS Domain Name (DOMAIN_NAME)	The posted domain name of the main device. (Range: 0 to 64 chars.)	Blank
SMTP Server Address (SMTP_ADDR)	The IP address or name of the mail server. (Name Range: 0 to 64 chars.)	Blank

■ NetWare® Settings

Item	Description	Initial Value
Frame Type (NW_FRAME_TYPE)	The frame type used by NetWare®.	Ethernet 802.2
NCP Burst Mode (NCP_BURST_MODE)	Determines whether the burst mode is used. (Normally, leave this setting on.)	On
Bindery PServer		
Print Server Name (PSERVER_BINDERY_NAME)	Name of the NetWare® printer server in use. (Range: 0 to 47 chars.)	Blank
NetWare® Server Name (PSERVER_BINDERY)	Name of the NetWare® file server of the NetWare® print server. (Range: 0 to 47 chars.)	Blank
Polling Interval (BINDERY_JOB_CHECK_DELAY)	The time interval between job confirmations. (Range: 1 to 15 sec.)	5
NDS PServer		
Print Server Name (PSERVER_NDS_NAME)	The name of the NetWare® print server in use. (Range: 0 to 64 chars.)	Blank
NDS Tree Name (PSERVER_NDS_TREE)	The name of the NDS tree of the NetWare® print server. (Range: 0 to 32 chars.)	Blank
Context Name (PSERVER_NDS_CONTEXT)	The name of the context of the NetWare® Print server. (Range: 0 to 255 chars.)	Blank
Polling Interval (NDS_JOB_CHECK_DELAY)	The time interval between job confirmations. (Range: 1 to 255 sec.)	5
RPrinter		
Print Server Name (RPRINTER_PS_NAME)	The name of the NetWare® print server in use. (Range: 0 to 47 chars.)	Blank
Printer Number (RPRINTER_NO)	The number used for the printer connection to the NetWare® print server. (Range: 0 to 15)	0
NPrinter		
Print Server Name (NPRINTER_PS_NAME)	The name of the NetWare® print server in use. (Range: 0 to 64 chars.)	Blank
Printer Number (NPRINTER_NO)	The number used for the printer connection to the NetWare® print server. (Range: 0 to 254)	0

■ NetBIOS Settings

Item	Description	Initial Value
Base Protocol (LSLM_ENB)	The protocol used in data transmission (determines whether NetBIOS used.)	NetBEUI (On)

■ AppleTalk Settings

Item	Description	Initial Value
Phase Type	The name of the phase type in use (determines whether AppleTalk is used.)	Phase 2
Name	The name of the printer displayed in the Chooser or the Print Center. Name length: 1 to 31 characters.	Canon NB-11FB
Zone	The name of the printer zone. Name length: 1 to 31 characters.	*

Software Applications that Use Network Settings

Network settings can be performed with the software applications listed in the table below.

Setting	GARO Device Setup Utility	Web Browser (Remote UI)	FTP Client	ARP/ PING Command	Printer Operation Panel
NetWare® Print Service Settings (→ P.4-6)	No	No	No	No	No
NetWare® Protocol Settings (→ P.4-11)	Yes*1	Yes	Yes	No	No
Setting IP Addresses (→ P.2-3)	Yes	Yes	Yes	Yes	Yes
TCP/IP Protocol Settings (→ P.2-9)	Yes*1	Yes	Yes	No	No
AppleTalk Protocol settings (→P.3-5)	Yes*1	Yes	Yes	No	No
NetBIOS Protocol Settings	No	Yes	Yes	No	No
E-Mail Notification Function Settings (→ P.2-35)	No	Yes	Yes	No	No

*1. Only followings can be set; IP Address, Frame Type, Phase

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